

UNITED STATES DEPARTMENT OF COMMERCE

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WEATHER BUREAU

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MONTHLY WEATHER REVIEW

SEPTEMBER 1946

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METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR SEPTEMBER 1946

AEROLOGICAL OBSERVATIONS

[For description of change in Table 1 and charts, see REVIEW, January 1946, p. 6]

TABLE 1.—Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade and relative humidity in percent, for standard pressures, as obtained by radiosondes during September 1946

STATIONS AND MEAN SURFACE PRESSURES

Standard pressure surface (mb.)	Albany, N. Y. (1,009.2 mb.)				Albuquerque, N. Mex. (838.2 mb.)				Apalachicola, Fla. (1,015.8 mb.)				Atlanta, Ga. (984.1 mb.)				Auburn, Calif. (954.2 mb.)				Big Spring, Tex. (927.0 mb.)				Bismarck, N. Dak. (954.2 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	28	93	14.9	82	29	1,620	21.6	43	30	5	21.5	88	30	300	20.6	79	29	501	21.8	35	30	774	23.3	67	30	505	14.0	67
1,000	28	171	16.2	80	29	52	(*)	---	30	143	24.3	85	30	161	(*)	---	29	89	(*)	---	30	104	(*)	---	30	103	(*)	---
950	28	609	15.6	72	29	519	(*)	---	30	592	21.9	82	30	608	20.5	74	29	545	22.5	34	30	558	(*)	---	30	544	(*)	---
900	28	1,096	13.3	71	29	998	(*)	---	30	1,060	18.8	81	30	1,072	17.7	77	29	1,008	20.7	31	30	1,031	22.0	65	30	998	13.3	59
850	28	1,545	10.4	72	29	1,497	(*)	---	30	1,550	15.6	80	30	1,560	14.9	75	29	1,499	17.2	30	30	1,526	19.3	66	30	1,477	10.3	63
800	28	2,047	7.4	66	29	2,023	19.5	41	30	2,062	12.7	74	30	2,071	11.9	70	29	2,012	13.4	29	30	2,046	16.2	69	30	1,979	7.5	62
750	28	2,581	4.8	52	29	2,577	15.4	44	30	2,604	9.8	70	30	2,612	8.7	68	29	2,557	9.7	29	30	2,596	12.8	70	30	2,514	4.8	59
700	28	3,136	2.1	45	29	3,155	10.7	55	30	3,173	6.9	64	30	3,177	5.9	58	29	3,120	6.2	24	30	3,170	9.2	66	30	3,093	1.8	57
650	28	3,732	-0.9	45	29	3,768	8.9	59	30	3,781	3.6	56	30	3,786	2.9	52	29	3,723	2.6	---	30	3,784	5.4	60	30	3,696	-1.4	57
600	28	4,366	-4.2	---	29	4,418	1.0	63	29	4,425	0.1	51	30	4,426	-0.5	48	29	4,365	-1.3	---	30	4,432	1.4	55	29	4,297	-4.8	55
550	28	5,046	-8.0	---	29	5,113	-3.5	61	29	5,118	-3.7	44	30	5,117	-4.4	38	29	5,051	-5.6	---	30	5,130	-2.9	53	29	4,977	-9.2	53
500	28	5,782	-12.6	---	29	5,850	-8.1	60	28	5,865	-8.1	48	29	5,862	-9.0	---	29	5,792	-10.4	---	29	5,878	-7.1	52	29	5,798	-13.9	51
450	28	6,581	-18.3	---	29	6,680	-12.8	45	27	6,682	-13.5	51	29	6,677	-14.6	---	29	6,600	-16.2	---	28	6,699	-12.0	41	29	6,510	-19.1	43
400	28	7,447	-24.4	---	28	7,561	-18.5	---	26	7,559	-19.6	49	29	7,551	-20.8	---	28	7,471	-22.8	---	27	7,588	-17.8	42	29	7,398	-25.3	---
350	28	8,405	-31.5	---	28	8,542	-25.9	---	26	8,537	-26.6	---	29	8,524	-28.2	---	28	8,435	-30.3	---	27	8,568	-24.8	---	27	8,333	-32.1	---
300	28	9,477	-39.6	---	28	9,640	-34.2	---	26	9,630	-35.1	---	29	9,611	-36.5	---	27	9,513	-39.0	---	26	9,674	-32.8	---	27	9,403	-40.0	---
250	28	10,700	-48.3	---	27	10,891	-43.4	---	25	10,875	-45.2	---	29	10,848	-45.9	---	25	10,745	-47.9	---	25	10,928	-42.6	---	24	10,641	-47.8	---
200	28	12,137	-56.7	---	26	12,359	-54.0	---	24	12,324	-56.4	---	28	12,299	-55.7	---	21	12,181	-55.9	---	22	12,397	-53.7	---	19	12,053	-53.7	---
175	27	12,980	-59.7	---	21	13,203	-59.6	---	23	13,162	-62.1	---	27	13,141	-60.6	---	19	13,029	-59.9	---	21	13,246	-59.3	---	17	12,951	-55.5	---
150	24	13,930	-62.2	---	15	14,158	-65.0	---	15	14,102	-67.2	---	26	14,085	-65.2	---	17	13,994	-62.3	---	14	14,200	-64.9	---	14	13,924	-56.7	---
125	21	15,061	-63.4	---	6	15,238	-71.1	---	10	15,177	-69.9	---	19	15,183	-68.2	---	12	15,116	-65.4	---	---	---	---	---	5	15,096	-56.0	---
100	14	16,439	-62.4	---	---	---	---	---	5	16,522	-71.6	---	8	16,523	-67.4	---	---	---	---	---	---	---	---	---	---	---	---	---
80	6	17,832	-61.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	

Standard pressure surface (mb.)	Boise, Idaho (914.5 mb.)				Brownsville, Tex. (1,011.6 mb.)				Buffalo, N. Y. (993.5 mb.)				Burrwood, La. (1,015.1 mb.)				Caribou, Maine (997.0 mb.)				Charleston, S. C. (1,016.6 mb.)				Ciudad Victoria, Mexico (972.3 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	30	868	16.2	45	30	6	26.8	86	30	221	15.7	79	26	2	25.2	82	29	191	11.7	85	30	14	21.4	90	30	335	27.3	69
1,000	30	95	(*)	---	30	108	26.3	86	30	165	(*)	---	26	134	24.5	80	29	165	(*)	---	30	157	22.0	87	30	84	(*)	---
950	30	542	(*)	---	30	566	23.5	86	30	608	16.7	65	26	588	21.7	74	29	601	13.7	70	30	604	20.2	80	30	540	26.0	70
900	30	1,004	18.8	37	30	1,033	21.1	76	30	1,062	14.1	65	26	1,051	18.6	75	29	1,051	11.4	68	30	1,069	18.0	74	30	1,015	22.6	73
850	30	1,493	16.2	35	30	1,527	18.6	71	30	1,542	11.0	64	26	1,540	15.5	70	29	1,527	8.6	65	30	1,557	15.5	67	30	1,511	18.9	77
800	30	2,004	12.4	37	30	2,046	15.8	67	30	2,046	8.0	59	26	2,052	12.8	64	29	2,026	6.4	50	30	2,070	13.0	61	30	2,030	15.5	80
750	30	2,544	8.3	40	30	2,591	12.8	66	30	2,581	5.3	47	26	2,601	10.1	62	29	2,558	4.0	41	30	2,611	10.2	59	30	2,579	12.3	78
700	30	3,106	4.0	43	30	3,169	9.5	64	30	3,137	2.5	44	26	3,164	7.0	57	29	3,111	1.3	41	30	3,182	7.3	57	30	3,152	9.3	72
650	30	3,707	-0.3	44	29	3,784	6.0	63	30	3,736	-0.7	39	26	3,775	3.9	51	29	3,706	-1.7	35	29	3,791	4.0	54	30	3,767	5.9	67
600	30	4,339	-4.7	45	28	4,434	2.6	57	30	4,367	-4.0	---	26	4,417	0.2	50	29	4,337	-5.5	---	29	4,439	0.4	50	30	4,416	2.1	64
550	30	5,018	-9.4	46	28	5,131	-1.2	52	30	5,051	-8.2	---	26	5,114	-3.9	53	29	5,012	-9.4	---	28	5,127	-3.5	49	29	5,111	-1.7	61
500	30	5,748	-14.4	38	28	5,888	-5.3	47	28	5,784	-13.0	---	26	5,856	-8.5	51	29	5,745	-14.1	---	27	5,878	-7.8	---	29	5,867	-5.9	59
450	30	6,539	-20.2	41	26	6,711	-10.4	36	28	6,587	-18.5	---	25	6,681	-13.7	54	29	6,544	-19.3	---	26	6,698	-12.8	---	29	6,694	-10.7	53
400	30	7,400	-26.7	---	24	7,606	-15.9	---	28	7,448	-24.6	---	25	7,555	-19.4	52	29	7,404	-25.1	---	26	7,579	-19.0	---	29	7,582	-16.1	54
350	30	8,349	-33.8	---	22	8,598	-22.8	---	28	8,405	-31.8	---	25	8,334	-26.4	---	27	8,362	-32.1	---	26	8,559	-26.2	---	29	8,583	-23.2	---
300	30	9,412	-41.5	---	22	9,709	-31.1	---	27	9,476	-39.6	---	24	9,629	-34.6	---	27	9,433	-40.4	---	24	9,656	-34.8	---	28	9,680	-31.7	---
250	30	10,627	-49.0	---	21	10,980	-40.9	---	27	10,698	-48.3	---	24	10,878	-44.3	---	25	10,660	-49.0	---	23	10,902	-44.8	---	28	10,941	-41.8	---
200	28	12,059	-54.9	---	20	12,460	-52.7	---	27	12,141	-55.7	---	21	12,339	-55.3	---	22	12,116	-56.7	---	23	12,356	-56.0	---	27	12,412	-54.4	---
175	25	12,909	-56.2	---	15	13,316	-59.2	---	24	12,982	-57.8	---	19	13,179	-60.7	---	18	12,947	-58.9	---	22	13,195	-61.4	---	26	13,250	-61.2	---
150	21	13,879	-58.2	---	12	14,274	-65.5	---	23	13,951	-60.5	---	8	14,127	-65.3	---	11	13,899	-59.7	---	16	14,128	-66.3	---	24	14,192	-67.6	---
125	14	15,005	-59.3	---	---	---	---	---	14	15,067	-61.6	---	---	---	---	---	8	15,092	-58.8	---	8	15,210	-70.0	---	10	15,274	-73.4	---
100	6	16,374	-57.6	---	---	---	---	---	6	16,434	-62.1	---	---	---	---	---	---	---	---	---	7	16,530	-70.2	---	---	---	---	---

See footnotes at end of table.

TABLE 1.—Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during September 1946—Continued

Standard pressure surface (mb.)	Columbia, Mo. (989.5 mb.)				Dodge City, Kans. (925.3 mb.)				El Paso, Tex. (880.8 mb.)				Ely, Nev. (809.1 mb.)				Fort Worth, Tex. (991.1 mb.)				Glasgow, Mont. (938.1 mb.)				Grand Junction, Colo. (851.5 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	30	230	18.8	73	29	787	19.1	68	30	1,195	25.1	49	30	1,908	14.9	49	29	211	23.8	72	30	648	13.7	63	30	1,474	20.4	25
1,000	30	148	(*)	---	29	110	(*)	---	30	60	(*)	---	30	63	(*)	---	29	132	(*)	---	30	102	(*)	---	30	54	(*)	---
950	30	595	19.7	64	29	560	(*)	---	30	531	(*)	---	30	520	(*)	---	29	591	22.2	70	30	545	(*)	---	30	520	(*)	---
900	30	1,055	17.1	64	29	1,026	19.6	63	30	1,008	(*)	---	30	994	(*)	---	29	1,049	19.5	71	30	998	13.7	56	30	997	(*)	---
850	30	1,541	14.2	59	29	1,517	17.3	61	30	1,507	23.7	45	30	1,484	(*)	---	29	1,540	16.5	74	30	1,477	10.8	57	30	1,489	(*)	---
800	30	2,051	11.3	59	29	2,033	14.8	60	30	2,034	10.9	49	30	2,004	17.3	28	29	2,055	13.5	75	30	1,979	7.6	58	30	2,013	19.8	23
750	30	2,592	8.7	52	29	2,580	12.2	50	30	2,590	15.5	54	30	2,556	14.0	28	29	2,599	10.7	71	30	2,512	4.3	58	30	2,568	15.3	25
700	30	3,155	5.6	49	29	3,153	8.7	42	30	3,167	10.8	60	30	3,129	9.1	33	29	3,170	7.9	60	30	3,067	1.0	56	30	3,143	10.3	29
650	30	3,762	2.6	44	29	3,763	5.0	40	30	3,783	6.1	63	30	3,738	3.8	40	28	3,783	4.8	47	30	3,662	-2.8	53	30	3,753	4.9	36
600	29	4,404	-1.2	40	29	4,411	0.8	39	30	4,432	1.4	65	30	4,382	-1.1	47	28	4,427	1.0	45	30	4,289	-6.7	51	30	4,399	-0.6	44
550	29	5,093	-5.5	39	29	5,105	-3.4	38	30	5,131	-3.2	64	30	5,069	-6.3	49	28	5,125	-2.9	40	30	4,964	-10.9	52	30	5,087	-5.8	45
500	29	5,834	-10.2	---	29	5,852	-7.9	---	30	5,880	-7.1	56	30	5,808	-11.0	41	27	5,870	-7.3	---	28	5,690	-15.6	52	30	5,828	-10.8	37
450	29	6,646	-15.4	---	29	6,670	-13.1	---	30	6,704	-11.6	49	29	6,620	-16.4	---	26	6,663	-12.3	---	28	6,479	-21.3	---	30	6,638	-16.2	---
400	29	7,519	-21.4	---	29	7,551	-19.6	---	29	7,585	-17.3	42	29	7,487	-22.2	---	25	7,574	-18.3	---	28	7,334	-27.5	---	30	7,507	-22.0	---
350	29	8,489	-28.6	---	29	8,528	-26.9	---	29	8,572	-24.7	---	29	8,455	-29.5	---	24	8,558	-26.4	---	28	8,281	-34.4	---	30	8,474	-29.5	---
300	28	9,575	-36.9	---	29	9,621	-35.0	---	29	9,674	-33.2	---	29	9,536	-37.9	---	22	9,664	-33.5	---	27	9,348	-42.1	---	30	9,554	-37.9	---
250	27	10,811	-46.3	---	29	10,867	-44.5	---	29	10,930	-42.9	---	28	10,777	-46.1	---	19	10,921	-43.3	---	26	10,562	-50.6	---	29	10,781	-47.0	---
200	26	12,263	-55.3	---	27	12,327	-54.5	---	28	12,397	-54.9	---	26	12,234	-54.9	---	19	12,387	-54.4	---	25	11,994	-55.3	---	29	12,229	-55.6	---
175	24	13,107	-58.7	---	25	13,159	-59.2	---	28	13,238	-61.2	---	22	13,077	-58.6	---	17	13,229	-60.0	---	20	12,810	-54.7	---	23	13,068	-59.5	---
150	22	14,078	-62.8	---	19	14,124	-63.4	---	26	14,176	-67.6	---	19	14,028	-61.9	---	8	14,203	-65.6	---	15	13,780	-54.7	---	15	14,042	-64.2	---
125	9	15,143	-65.1	---	7	15,186	-67.2	---	6	15,259	-72.5	---	12	15,131	-65.0	---	---	---	---	---	10	14,912	-54.7	---	8	15,125	-67.1	---
100	---	---	---	---	---	---	---	---	---	---	---	---	5	16,470	-63.2	---	---	---	---	---	---	---	---	---	---	---	---	---

Standard pressure surface (mb.)	Great Falls, Mont. (887.1 mb.)				Greensboro, N. C. (988.4 mb.)				Hatteras, N. C. (1,018.6 mb.)				Habana, Cuba (.... mb.)				Honolulu, T. H. (1,014.1 mb.)				Huntington, W. Va. (999.1 mb.)				International Falls, Minn. (974.5 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	30	1,128	14.0	53	30	273	18.3	84	30	3	22.5	87	---	---	---	---	23	3	28.3	56	30	172	15.0	90	30	360	10.6	82
1,000	30	99	(*)	---	30	172	(*)	---	30	164	21.8	84	---	---	---	---	23	127	26.2	60	30	164	(*)	---	30	141	(*)	---
950	30	545	(*)	---	30	616	18.5	75	30	610	19.5	76	---	---	---	---	23	580	22.1	68	30	605	18.8	60	30	574	11.5	74
900	30	1,010	(*)	---	30	1,077	15.6	74	30	1,072	17.0	71	---	---	---	---	23	1,045	18.3	72	30	1,067	15.8	63	30	1,022	8.3	72
850	30	1,488	13.1	48	30	1,561	12.3	77	30	1,559	14.5	63	---	---	---	---	23	1,533	15.8	65	30	1,550	12.4	66	30	1,493	6.3	71
800	30	1,994	9.4	52	30	2,067	9.7	70	30	2,070	12.2	56	---	---	---	---	23	2,047	14.1	51	30	2,056	9.1	66	30	1,988	3.9	66
750	30	2,532	5.6	55	30	2,603	7.1	63	29	2,616	9.6	50	---	---	---	---	23	2,592	12.1	35	30	2,590	6.3	57	30	2,516	1.4	60
700	30	3,087	1.4	60	30	3,166	4.1	57	29	3,180	6.6	50	---	---	---	---	23	3,164	9.8	---	29	3,152	3.5	50	30	3,063	-1.2	62
650	30	3,682	-2.8	64	30	3,767	0.6	53	29	3,790	3.5	46	---	---	---	---	23	3,777	7.0	---	29	3,753	0.3	49	30	3,654	-4.6	50
600	30	4,309	-6.8	61	30	4,404	-2.4	43	29	4,431	0.0	49	---	---	---	---	23	4,429	3.7	---	28	4,390	-2.9	38	30	4,277	-8.0	48
550	30	4,984	-11.2	56	30	5,089	-6.3	45	28	5,122	-4.0	51	---	---	---	---	23	5,133	-0.7	---	28	5,073	-6.7	---	30	4,946	-11.8	48
500	30	5,708	-16.1	53	30	5,831	-11.0	47	28	5,868	-8.5	49	---	---	---	---	23	5,884	-5.6	---	27	5,815	-11.2	---	30	5,671	-16.4	46
450	30	6,499	-22.0	---	30	6,639	-16.3	49	28	6,686	-13.6	48	---	---	---	---	22	6,710	-11.1	---	27	6,621	-16.6	---	30	6,465	-21.3	---
400	30	7,349	-28.2	---	29	7,510	-22.4	---	27	7,567	-19.3	52	---	---	---	---	21	7,595	-16.9	---	27	7,491	-22.7	---	30	7,317	-26.9	---
350	30	8,292	-35.7	---	28	8,479	-29.8	---	26	8,549	-26.6	---	---	---	---	---	20	8,582	-24.1	---	27	8,457	-29.8	---	30	8,264	-34.3	---
300	30	9,346	-43.6	---	28	9,560	-38.0	---	26	9,643	-35.0	---	---	---	---	---	16	9,692	-32.6	---	27	9,533	-38.1	---	30	9,325	-41.8	---
250	29	10,559	-51.2	---	28	10,790	-47.6	---	26	10,888	-44.9	---	---	---	---	---	15	10,948	-41.9	---	26	10,765	-47.4	---	28	10,540	-49.3	---
200	27	11,989	-55.8	---	28	12,231	-57.1	---	25	12,343	-55.2	---	---	---	---	---	12	12,430	-51.5	---	25	12,210	-56.3	---	28	11,967	-54.8	---
175	21	12,840	-58.4	---	26	13,062	-61.3	---	21	13,183	-59.5	---	---	---	---	---	9	13,286	-57.1	---	24	13,052	-59.9	---	28	12,817	-56.2	---
150	16	13,818	-56.9	---	20	14,029	-65.0	---	5	14,150	-64.7	---	---	---	---	---	6	14,289	-62.8	---	19	13,987	-63.2	---	25	13,797	-57.0	---
125	11	14,946	-56.9	---	10	15,101	-67.8	---	---	---	---	---	---	---	---	---	---	---	---	9	15,116	-64.1	---	18	14,906	-56.5	---	
100	5	16,288	-56.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5	16,332	-57.0	---	

Standard pressure surface (mb.)	Joliet, Ill. (997.1 mb.)				Lake Charles, La. (1,014.4 mb.)				Lander, Wyo. (829.8 mb.)				Las Vegas, Nev. (943.0 mb.)				Little Rock, Ark. (1,007.9 mb.)				Mazatlan, Mexico (1,006.6 mb.)				Medford, Oreg. (966.6 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity

TABLE 1.—Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during September 1948—Continued

Standard pressure surface (mb.)	Merida, Mexico (1,009.0 mb.)				Miami, Fla. (1,015.4 mb.)				Nantucket, Mass. (1,019.4 mb.)				Nashville, Tenn. (977.3 mb.)				North Platte, Nebr. (917.3 mb.)				Oakland, Calif. (1,011.6 mb.)				Ogden, Utah (964.4 mb.)				
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	
Surface	30	27	26.8	80	30	4	25.0	88	30	14	15.6	93	30	180	20.5	76	30	840	16.4	74	30	2	18.0	70	30	1,355	16.8	73	
1,000	30	106	26.2	79	30	159	25.4	84	30	178	17.1	85	30	156	20.2	77	30	101	18.3	74	30	101	17.5	69	30	84	16.8	73	
950	30	563	23.9	76	30	594	22.5	83	30	619	16.6	88	30	600	17.3	77	30	550	18.3	66	30	549	15.6	62	30	539	16.8	73	
900	30	1,031	21.0	76	30	1,060	19.8	80	30	1,075	14.4	67	30	1,065	17.3	67	30	1,012	18.3	66	30	1,005	19.4	60	30	1,009	17.5	63	
850	30	1,524	17.9	76	30	1,551	16.7	78	30	1,557	12.1	61	30	1,552	13.9	76	30	1,501	17.1	57	30	1,494	17.2	25	30	1,498	18.6	34	
800	29	2,042	15.0	73	30	2,066	13.7	76	30	2,053	9.7	52	30	2,060	10.6	73	30	2,016	14.2	55	30	2,008	14.5	30	30	2,015	18.3	34	
750	29	2,590	12.0	72	30	2,611	10.7	74	30	2,600	7.0	48	30	2,599	8.0	59	30	2,563	10.9	54	30	2,552	11.1	30	30	2,561	11.0	37	
700	29	3,163	8.7	69	30	3,181	7.5	71	30	3,160	3.8	45	30	3,162	5.1	51	30	3,131	7.5	48	30	3,121	8.1	30	30	3,129	6.8	41	
650	28	3,776	5.3	64	29	3,791	4.0	69	30	3,762	0.6	43	29	3,764	1.8	46	30	3,739	3.2	44	30	3,732	4.9	30	30	3,735	2.2	44	
600	28	4,424	1.5	61	29	4,434	0.3	61	30	4,398	-2.6	32	29	4,406	-1.8	38	30	4,381	-1.2	40	30	4,377	1.3	30	30	4,374	-2.5	47	
550	28	5,121	-2.3	57	28	5,130	-3.6	57	30	5,083	-6.4	30	29	5,094	-5.5	30	30	5,073	-5.8	43	30	5,070	-3.2	30	30	5,058	-7.3	48	
500	27	5,872	-6.9	56	27	5,876	-8.0	55	29	5,820	-11.2	28	28	5,835	-10.0	29	30	5,808	-10.5	37	30	5,819	-8.4	30	30	5,795	-12.2	44	
450	26	6,696	-11.6	47	25	6,698	-13.0	55	29	6,626	-16.7	28	28	6,645	-15.0	29	30	6,620	-15.9	30	30	6,634	-14.2	30	30	6,599	-17.7	42	
400	26	7,581	-17.7	46	25	7,579	-18.5	57	29	7,495	-22.7	27	27	7,517	-21.5	29	30	7,487	-22.4	29	30	7,513	-20.6	29	30	7,462	-24.2	40	
350	24	8,566	-24.7	25	28	8,560	-25.9	28	28	8,461	-29.9	28	27	8,491	-28.6	29	30	8,455	-29.6	29	30	8,483	-28.2	27	30	8,420	-31.1	40	
300	23	9,666	-33.4	25	29	9,658	-34.5	28	28	9,540	-38.1	25	25	9,567	-37.3	29	30	9,534	-37.9	29	30	9,570	-36.5	26	30	9,491	-39.1	40	
250	23	10,919	-43.7	25	10	10,904	-44.9	27	27	10,766	-47.6	24	24	10,797	-47.2	28	30	10,767	-46.5	25	30	10,812	-44.9	23	30	10,722	-47.3	40	
200	21	12,380	-55.7	23	12	12,361	-57.1	23	26	12,205	-57.4	22	22	12,246	-55.3	28	30	12,224	-54.8	28	30	12,276	-53.1	23	30	12,171	-54.9	40	
175	20	13,213	-62.2	22	13	13,195	-63.6	24	25	13,044	-61.3	20	20	13,099	-58.9	27	30	13,073	-58.5	19	30	13,122	-56.7	22	30	13,013	-57.5	40	
150	16	14,159	-68.7	12	14	14,125	-69.0	17	24	13,997	-63.3	13	13	14,042	-62.2	24	30	14,042	-61.6	17	30	14,089	-59.7	21	30	13,984	-60.1	40	
125	10	15,247	-74.4	7	15	15,205	-73.5	19	17	15,117	-64.2	7	7	15,154	-66.4	16	30	15,137	-63.2	6	30	15,189	-60.3	14	30	15,128	-61.8	40	
100								9	16	16,453	-62.7																		
50								6	17	17,849	-60.8																		

Oklahoma City, Okla. (970.8 mb.)				Omaha, Nebr. (979.6 mb.)				Phoenix, Ariz. (968.9 mb.)				Pittsburgh, Pa. (975.6 mb.)				Portland, Maine (1018.6 mb.)				Rapid City, S. Dak. (903.2 mb.)				St. Paul, Minn. (988.9 mb.)					
Surface	30	391	21.0	73	30	308	18.8	76	30	339	29.2	52	30	382	18.3	67	28	20	13.6	90	30	981	13.8	68	30	225	15.4	73	
1,000	30	129	(*)		30	130	(*)		30	55	(*)		30	168	(*)		28	176	15.8	81	30	104	(*)		30	126	(*)		
950	30	579	21.5	68	30	574	18.6	67	30	521	31.4	41	30	616	18.3	62	28	614	15.9	66	30	549	(*)		30	568	14.7	66	
900	30	1,045	19.0	65	30	1,034	16.3	65	30	999	28.1	41	30	1,072	16.0	60	28	1,070	13.3	67	30	1,010	13.3	66	30	1,021	12.1	69	
850	30	1,534	16.2	63	30	1,519	13.7	62	30	1,502	24.1	43	30	1,555	12.5	65	28	1,550	10.9	62	30	1,494	13.8	57	30	1,498	9.4	70	
800	30	2,048	13.5	60	30	2,028	11.0	56	30	2,029	19.7	47	30	2,061	9.2	59	28	2,053	8.7	51	30	2,003	10.6	50	30	2,000	6.7	63	
750	30	2,591	11.1	54	30	2,569	8.3	53	30	2,586	15.3	49	30	2,599	6.2	53	28	2,589	6.1	46	30	2,542	7.4	58	30	2,532	4.6	64	
700	30	3,163	8.0	51	30	3,131	4.5	50	30	3,162	10.7	50	30	3,156	3.4	46	28	3,148	3.6	39	30	3,102	3.9	57	30	3,088	2.0	48	
650	30	3,772	4.5	45	30	3,734	1.1	49	30	3,780	6.4	47	30	3,754	0.3	43	28	3,746	0.6	32	30	3,704	0.2	57	30	3,686	-1.3	40	
600	30	4,419	0.6	45	30	4,371	-2.7	44	30	4,427	2.1	44	30	4,391	-3.1	35	28	4,383	-3.0	30	30	4,338	-3.8	54	30	4,317	-5.1	45	
550	30	5,112	-3.2	38	28	5,054	-6.9	37	29	5,130	-2.2	29	30	5,077	-6.8	27	27	5,071	-7.0	29	30	5,024	-8.3	50	30	4,995	-9.1	42	
500	30	5,860	-7.9	35	28	5,791	-11.3	30	29	5,878	-6.8	29	30	5,813	-11.3	30	26	5,807	-11.7	29	30	5,755	-13.1	53	30	5,727	-13.4	42	
450	30	6,677	-13.2	38	28	6,600	-16.5	29	29	6,708	-12.2	29	30	6,621	-16.8	26	26	6,614	-17.3	29	30	6,557	-18.5	51	30	6,524	-18.7	40	
400	30	7,559	-19.4	38	28	7,468	-23.0	29	29	7,585	-18.1	29	30	7,487	-23.2	25	27	7,475	-23.3	29	30	7,418	-24.9	29	30	7,389	-25.1	40	
350	30	8,537	-26.6	38	28	8,432	-30.3	28	28	8,565	-25.6	26	30	8,450	-30.3	23	28	8,444	-30.4	29	30	8,374	-32.1	29	30	8,346	-32.1	40	
300	30	9,634	-34.8	28	28	9,510	-38.6	26	27	9,665	-33.9	27	30	9,527	-38.4	23	29	9,520	-38.6	29	30	9,444	-40.1	29	30	9,417	-40.0	40	
250	30	10,880	-44.0	28	28	10,738	-43.5	26	10	10,717	-43.5	26	30	10,756	-47.3	23	23	10,747	-48.1	29	30	10,664	-48.6	29	30	10,639	-48.7	40	
200	30	12,342	-54.6	26	28	12,185	-55.8	26	26	12,382	-54.8	25	30	12,200	-55.9	22	22	12,177	-57.6	26	30	12,136	-56.1	26	30	12,078	-56.6	40	
175	28	13,185	-59.9	26	26	13,034	-58.8	25	25	13,227	-60.8	25	28	13,052	-58.5	21	21	13,012	-60.6	25	30	12,976	-58.6	29	30	12,914	-58.4	40	
150	24	14,136	-65.4	14	24	13,984	-61.3	13	20	14,165	-66.7	15	25	14,007	-61.6	18	21	13,965	-62.2	19	30	13,945	-59.8	22	30	13,880	-59.6	40	
125	8	15,216	-69.2	7	13	15,082	-62.6	6	8	15,249	-71.2	11	18	15,101	-63.0	17	15	15,109	-63.8	13	30	15,092	-62.8	27	30	15,019	-60.6	40	
100																													
50																													

San Antonio, Tex. (986.1 mb.)				San Juan, P. R. (1,014.0 mb.)				Santa Maria, Calif. (1,003.5 mb.)				Sault Ste. Marie, Mich. (991.4 mb.)				Spokane, Wash. (944.4 mb.)				Swan Island, W. I. (1,011.2 mb.)				Tacubaya, Mexico (73.4 mb.)				
Surface	30	240	24.4	84	30	15	25.5	86	30	71	14.9	81	30	221	11.5	88	30	598	15.9	58	29	10	26.7	84	30	2,305	16.7	73
1,000	30 <td>117</td> <td>(*)</td> <td></td> <td>30<td>137</td><td>24.7<td>86</td><td>30<td>100<td>14.8<td>80</td><td>30<td>147</td><td>(*)</td><td></td><td>30<td>106</td><td>(*)</td><td></td><td>29<td>109</td><td>26.0</td><td>84</td><td>30<td>51</td><td>(*)</td><td></td></td></td></td></td></td></td></td></td></td>	117	(*)		30 <td>137</td> <td>24.7<td>86</td><td>30<td>100<td>14.8<td>80</td><td>30<td>147</td><td>(*)</td><td></td><td>30<td>106</td><td>(*)</td><td></td><td>29<td>109</td><td>26.0</td><td>84</td><td>30<td>51</td><td>(*)</td><td></td></td></td></td></td></td></td></td></td>	137	24.7 <td>86</td> <td>30<td>100<td>14.8<td>80</td><td>30<td>147</td><td>(*)</td><td></td><td>30<td>106</td><td>(*)</td><td></td><td>29<td>109</td><td>26.0</td><td>84</td><td>30<td>51</td><td>(*)</td><td></td></td></td></td></td></td></td></td>	86	30 <td>100<td>14.8<td>80</td><td>30<td>147</td><td>(*)</td><td></td><td>30<td>106</td><td>(*)</td><td></td><td>29<td>109</td><td>26.0</td><td>84</td><td>30<td>51</td><td>(*)</td><td></td></td></td></td></td></td></td>	100 <td>14.8<td>80</td><td>30<td>147</td><td>(*)</td><td></td><td>30<td>106</td><td>(*)</td><td></td><td>29<td>109</td><td>26.0</td><td>84</td><td>30<td>51</td><td>(*)</td><td></td></td></td></td></td></td>	14.8 <td>80</td> <td>30<td>147</td><td>(*)</td><td></td><td>30<td>106</td><td>(*)</td><td></td><td>29<td>109</td><td>26.0</td><td>84</td><td>30<td>51</td><td>(*)</td><td></td></td></td></td></td>	80	30 <td>147</td> <td>(*)</td> <td></td> <td>30<td>106</td><td>(*)</td><td></td><td>29<td>109</td><td>26.0</td><td>84</td><td>30<td>51</td><td>(*)</td><td></td></td></td></td>	147	(*)		30 <td>106</td> <td>(*)</td> <td></td> <td>29<td>109</td><td>26.0</td><td>84</td><td>30<td>51</td><td>(*)</td><td></td></td></td>	106	(*)		29 <td>109</td> <td>26.0</td> <td>84</td> <td>30<td>51</td><td>(*)</td><td></td></td>	109	26.0	84	30 <td>51</td> <td>(*)</td> <td></td>	51	(*)	
950	30 <td>568</td> <td>23.2</td> <td>82</td> <td>30<td>546</td><td>22.1</td><td>88</td><td>30<td>546</td><td>19.3</td><td>66</td><td>30<td>581</td><td>12.8</td><td>75</td><td>30<td>550</td><td>(*)</td><td></td><td>29<td>567</td><td>22.8</td><td>85</td><td>30<td>516</td><td>(*)</td><td></td></td></td></td></td></td></td>	568	23.2	82	30 <td>546</td> <td>22.1</td> <td>88</td> <td>30<td>546</td><td>19.3</td><td>66</td><td>30<td>581</td><td>12.8</td><td>75</td><td>30<td>550</td><td>(*)</td><td></td><td>29<td>567</td><td>22.8</td><td>85</td><td>30<td>516</td><td>(*)</td><td></td></td></td></td></td></td>	546	22.1	88	30 <td>546</td> <td>19.3</td> <td>66</td> <td>30<td>581</td><td>12.8</td><td>75</td><td>30<td>550</td><td>(*)</td><td></td><td>29<td>567</td><td>22.8</td><td>85</td><td>30<td>516</td><td>(*)</td><td></td></td></td></td></td>	546	19.3	66	30 <td>581</td> <td>12.8</td> <td>75</td> <td>30<td>550</td><td>(*)</td><td></td><td>29<td>567</td><td>22.8</td><td>85</td><td>30<td>516</td><td>(*)</td><td></td></td></td></td>	581	12.8	75	30 <td>550</td> <td>(*)</td> <td></td> <td>29<td>567</td><td>22.8</td><td>85</td><td>30<td>516</td><td>(*)</td><td></td></td></td>	550	(*)		29 <td>567</td> <td>22.8</td> <td>85</td> <td>30<td>516</td><td>(*)</td><td></td></td>	567	22.8	85	30 <td>516</td> <td>(*)</td> <td></td>	516	(*)	
900	30 <td>1,039</td> <td>19.6</td> <td>84</td> <td>30<td>1,057</td><td>19.4</td><td>86</td><td>30<td>1,005</td><td>21.2</td><td>35</td><td>30<td>1,032</td><td>10.6</td><td>72</td><td>30<td>1,007</td><td>15.4</td><td>50</td><td>29<td>1,030</td><td>19.9</td><td>82</td><td>30</td><td>991</td><td>(*)</td><td></td></td></td></td></td></td>	1,039	19.6	84	30 <td>1,057</td> <td>19.4</td> <td>86</td> <td>30<td>1,005</td><td>21.2</td><td>35</td><td>30<td>1,032</td><td>10.6</td><td>72</td><td>30<td>1,007</td><td>15.4</td><td>50</td><td>29<td>1,030</td><td>19.9</td><td>82</td><td>30</td><td>991</td><td>(*)</td><td></td></td></td></td></td>	1,057	19.4	86	30 <td>1,005</td> <td>21.2</td> <td>35</td> <td>30<td>1,032</td><td>10.6</td><td>72</td><td>30<td>1,007</td><td>15.4</td><td>50</td><td>29<td>1,030</td><td>19.9</td><td>82</td><td>30</td><td>991</td><td>(*)</td><td></td></td></td></td>	1,005	21.2	35	30 <td>1,032</td> <td>10.6</td> <td>72</td> <td>30<td>1,007</td><td>15.4</td><td>50</td><td>29<td>1,030</td><td>19.9</td><td>82</td><td>30</td><td>991</td><td>(*)</td><td></td></td></td>	1,032	10.6	72	30 <td>1,007</td> <td>15.4</td> <td>50</td> <td>29<td>1,030</td><td>19.9</td><td>82</td><td>30</td><td>991</td><td>(*)</td><td></td></td>	1,007	15.4	50	29 <td>1,030</td> <td>19.9</td> <td>82</td> <td>30</td> <td>991</td> <td>(*)</td> <td></td>	1,030	19.9	82	30	991	(*)	
850	30 <td>1,532</td> <td>17.4</td> <td>83</td> <td>30<td>1,548</td><td>16.8</td><td>78</td><td>30<td>1,497</td><td>18.6</td><td>32</td><td>30<td>1,506</td><td>8.3</td><td>64</td><td>30<td>1,488</td><td>11.6</td><td>52</td><td>29<td>1,5</td></td></td></td></td></td>	1,532	17.4	83	30 <td>1,548</td> <td>16.8</td> <td>78</td> <td>30<td>1,497</td><td>18.6</td><td>32</td><td>30<td>1,506</td><td>8.3</td><td>64</td><td>30<td>1,488</td><td>11.6</td><td>52</td><td>29<td>1,5</td></td></td></td></td>	1,548	16.8	78	30 <td>1,497</td> <td>18.6</td> <td>32</td> <td>30<td>1,506</td><td>8.3</td><td>64</td><td>30<td>1,488</td><td>11.6</td><td>52</td><td>29<td>1,5</td></td></td></td>	1,497	18.6	32	30 <td>1,506</td> <td>8.3</td> <td>64</td> <td>30<td>1,488</td><td>11.6</td><td>52</td><td>29<td>1,5</td></td></td>	1,506	8.3	64	30 <td>1,488</td> <td>11.6</td> <td>52</td> <td>29<td>1,5</td></td>	1,488	11.6	52	29 <td>1,5</td>	1,5						

See footnotes at end of table.

TABLE 1.—Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during September 1946—Continued

Standard pressure surface (mb.)	Tampa, Fla. (1,015.3 mb.)				Tatoosh Island, Wash. (1,012.4 mb.)				Toledo, Ohio (996.1 mb.)			Washington, D. C. (1,017.4 mb.)				
	Number of obser- vations	Dynamic height	Temperature	Relative humidity	Number of obser- vations	Dynamic height	Temperature	Relative humidity	Number of obser- vations	Dynamic height	Temperature	Relative humidity	Number of obser- vations	Dynamic height	Temperature	Relative humidity
surface.....	27	9	24.3	89	30	31	12.2	90	30	191	16.6	74	30	25	20.1	80
1,000.....	27	142	24.1	86	30	134	12.1	86	30	157	(*)	30	174	20.3	74	
950.....	27	593	22.1	81	30	571	11.4	76	30	599	18.0	62	30	619	18.2	69
900.....	27	1,060	19.3	80	30	1,014	9.7	71	30	1,059	15.1	62	30	1,077	15.4	66
850.....	27	1,551	16.3	79	30	1,488	7.5	66	30	1,541	12.1	62	30	1,560	12.4	66
800.....	27	2,065	13.2	78	30	1,985	5.0	58	30	2,046	9.0	63	30	2,066	9.6	61
750.....	27	2,604	10.0	74	30	2,516	2.3	55	30	2,583	5.8	56	30	2,607	6.7	54
700.....	27	3,177	6.9	69	30	3,063	-0.8	52	30	3,140	2.7	50	30	3,163	3.6	51
650.....	27	3,781	3.6	66	30	3,657	-4.1	53	29	3,740	-0.3	42	29	3,768	0.5	47
600.....	27	4,430	0.0	62	30	4,279	-7.7	51	29	4,374	-3.4	35	29	4,403	-2.7	41
550.....	27	5,119	-3.6	55	29	4,954	-11.7	49	29	5,055	-7.3	34	29	5,091	-6.5	
500.....	27	5,869	-7.9	51	29	5,674	-16.3	51	29	5,794	-11.9		29	5,828	-10.9	
450.....	27	6,683	-13.0	51	27	6,469	-21.7		28	6,600	-17.4		29	6,637	-16.2	
400.....	27	7,567	-19.0	49	27	7,319	-27.7		28	7,465	-23.5		29	7,508	-22.4	
350.....	27	8,547	-26.0		27	8,265	-34.4		28	8,427	-30.5		29	8,473	-30.1	
300.....	27	9,644	-34.4		26	9,339	-41.7		28	9,504	-38.5		29	9,551	-38.5	
250.....	27	10,890	-44.7		25	10,557	-49.8		26	10,735	-47.3		29	10,779	-47.8	
200.....	27	12,341	-56.9		22	12,000	-54.6		25	12,185	-55.3		28	12,220	-56.9	
175.....	27	13,172	-63.6		17	12,846	-54.9		24	13,030	-58.4		25	13,046	-60.1	
150.....	21	14,112	-68.9		14	13,822	-55.1		21	14,010	-61.4		25	14,000	-63.1	
125.....	7	15,197	-74.3		8	14,990	-55.0		15	15,121	-62.8		18	15,105	-65.5	
100.....								10	16,492	-62.4		7	16,461	-64.8		

* Data not yet received.

* Temperature and relative humidity data for this level are not available or are available only for certain days. See note entitled "Change in Summarization of Radiosonde Data," p. 6, in the January 1946 issue of the MONTHLY WEATHER REVIEW.

NOTE.—All observations scheduled between 0300 and 0500, G. C. T., except at Mazatlan and Merida, where they are taken near 0200, G. C. T.

"Number of observations" refers to those of dynamic height only. (In a few cases temperature or humidity data may be missing for one or more standard pressure surfaces of some observations.) Relative humidity data are not published for standard pressure surfaces having a corresponding mean temperature below -20° C.

All relative humidity observations are obtained by electric hygrometer and have been adjusted to compensate for the values occurring below the operating range of the humidity element. For explanation of the adjustment see article entitled "Curve Method for Obtaining Monthly Means of Relative Humidity," p. 241, MONTHLY WEATHER REVIEW, December 1944.

None of the means included in these tables are based on less than 15 observations at the surface or 5 observations at a standard pressure level.

LATE REPORTS FOR HONOLULU, T. H., AND SWAN ISLAND, W. I.

TABLE 1.—Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during August 1946

STATIONS AND MEAN SURFACE PRESSURES

Standard pressure surface (mb.)	Honolulu, T. H. (1,014.7mb.)				Standard pressure surface (mb.)	Swan Island, W. I. (1,013.2 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity		Number of observations	Dynamic height	Temperature	Relative humidity
Surface.....	27	3	28.7	57	Surface.....	31	10	26.9	81
1,000.....	27	129	26.0	62	1,000.....	31	126	26.0	81
950.....	27	584	22.3	68	950.....	31	581	22.7	82
900.....	27	1,047	18.6	72	900.....	31	1,047	19.8	79
850.....	27	1,536	16.6	64	850.....	31	1,538	17.0	70
800.....	27	2,052	15.2	42	800.....	31	2,054	14.3	63
750.....	27	2,599	12.6	34	750.....	31	2,600	11.3	56
700.....	27	3,171	9.7	30	700.....	30	3,171	8.2	52
650.....	27	3,783	7.1		650.....	30	3,784	4.6	48
600.....	26	4,437	4.1		600.....	29	4,429	0.7	43
550.....	24	5,144	0.3		550.....	28	5,117	-3.6	41
500.....	24	5,899	-4.9		500.....	28	5,867	-8.2	41
450.....	22	6,730	-10.1		450.....	28	6,686	-13.1	45
400.....	21	7,618	-16.0		400.....	28	7,567	-18.7	45
350.....	18	8,606	-22.9		350.....	28	8,548	-25.8	
300.....	14	9,712	-33.5		300.....	27	9,645	-34.2	
250.....	13	10,974	-41.1		250.....	27	10,894	-44.3	
200.....	10	12,455	-52.0		200.....	26	12,351	-56.3	
175.....	7	13,300	-57.6		175.....	25	13,187	-62.9	
150.....					150.....	19	14,131	-68.8	
125.....					125.....	8	15,189	-74.1	

TABLE 2.—Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (±200 G. C. T.) during September 1946. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°). Velocities in meters per second

Altitude (meters) m. s. l.	Ablene, Tex. (534 m.)			Albuquerque, N. Mex. (1,630 m.)			Atlanta, Ga. (299 m.)			Billings, Mont. (1,095 m.)			Bismarck, N. Dak. (512 m.)			Boise, Idaho (868 m.)			Brownsville, Tex. (7 m.)			Buffalo, N. Y. (220 m.)			Burlington, Vt. (100 m.)			Charleston, S. C. (16 m.)			Cincinnati, Ohio (150 m.)			Denver, Colo. (1,627 m.)			El Paso, Tex. (1,198 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity			
Surface.....	30	128	4.3	30	259	2.1	29	78	2.0	28	298	1.5	28	241	1.9	30	322	2.5	29	107	4.2	30	311	0.3	26	254	1.0	29	86	1.7	29	40	0.4	29	84	1.4	30	191	1.5
500.....	30	133	4.7	30	259	2.1	29	82	3.0	28	282	3.1	28	241	3.0	30	319	2.5	29	113	5.9	30	286	1.4	26	221	2.2	29	80	2.5	29	194	0.6	29	84	1.4	30	191	1.5
1,000.....	29	240	3.6	30	259	2.1	29	93	2.9	29	282	3.0	28	241	3.0	30	319	2.5	28	123	4.7	29	246	3.3	26	239	3.2	28	70	2.3	28	210	1.6	29	84	1.4	30	191	1.5
1,500.....	26	257	2.8	30	249	2.5	28	89	1.3	28	265	3.8	24	239	5.6	30	290	2.0	25	170	1.3	21	240	4.8	24	254	5.8	23	10	0.9	23	197	2.6	29	84	1.4	30	191	1.5
2,000.....	22	193	2.4	30	260	2.3	21	46	0.8	26	262	5.9	21	253	7.0	30	243	3.3	23	165	0.7	18	248	5.8	20	260	6.5	22	302	1.9	22	213	2.3	28	133	1.3	30	209	1.2
2,500.....	20	245	2.4	30	261	3.1	18	299	2.2	23	264	8.3	21	250	10.1	30	243	5.5	22	167	1.1	15	257	3.9	20	268	5.9	21	280	2.1	21	246	3.2	26	188	1.8	29	222	2.2
3,000.....	18	291	3.6	30	275	4.2	13	301	3.7	21	276	10.6	20	273	12.1	29	243	8.2	17	197	0.9	14	258	5.0	16	288	6.0	20	264	3.2	18	286	1.7	25	262	6.3	27	223	2.2
4,000.....	16	298	3.9	27	275	6.3	10	281	5.9	20	273	13.3	18	282	15.3	27	249	8.6	14	261	1.4	12	248	3.3	16	287	8.2	17	255	3.5	12	221	2.0	24	270	11.0	26	244	3.1
5,000.....	13	285	4.3	26	262	6.2	10	281	5.9	19	275	15.4	17	287	16.9	24	253	10.3	12	260	0.9	11	248	3.3	15	288	8.3	14	244	4.4	10	260	5.1	17	288	17.3	14	264	5.7
6,000.....	13	285	4.3	26	262	6.2	10	281	5.9	19	275	15.4	17	287	16.9	24	253	10.3	12	260	0.9	11	248	3.3	15	288	8.3	14	244	4.4	10	260	5.1	17	288	17.3	14	264	5.7
8,000.....	11	282	7.4	24	251	9.5	10	281	5.9	12	282	19.9	14	291	15.8	21	267	14.2	12	260	0.9	11	248	3.3	15	288	8.3	14	244	4.4	10	260	5.1	17	288	17.3	14	264	5.7
10,000.....	11	282	7.4	24	251	9.5	10	281	5.9	12	282	19.9	14	291	15.8	21	267	14.2	12	260	0.9	11	248	3.3	15	288	8.3	14	244	4.4	10	260	5.1	17	288	17.3	14	264	5.7
12,000.....	11	282	7.4	24	251	9.5	10	281	5.9	12	282	19.9	14	291	15.8	21	267	14.2	12	260	0.9	11	248	3.3	15	288	8.3	14	244	4.4	10	260	5.1	17	288	17.3	14	264	5.7
14,000.....	11	282	7.4	24	251	9.5	10	281	5.9	12	282	19.9	14	291	15.8	21	267	14.2	12	260	0.9	11	248	3.3	15	288	8.3	14	244	4.4	10	260	5.1	17	288	17.3	14	264	5.7

Altitude (meters) m. s. l.	Ely, Nev. (1,910 m.)			Grand Junction, Colo. (1,475 m.)			Greensboro, N. C. (271 m.)			Havre, Mont. (767 m.)			Jacksonville, Fla. (16 m.)			Joliet, Ill. (178 m.)			Las Vegas, Nev. (375 m.)			Little Rock, Ark. (88 m.)			Medford, Oreg. (416 m.)			Miami, Fla. (12 m.)			Mobile, Ala. (66 m.)			Nashville, Tenn. (194 m.)			New York, N. Y. (15 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity			
Surface.....	30	238	2.9	30	258	2.2	29	74	1.5	27	280	2.3	29	68	4.7	30	218	1.3	30	154	1.6	29	82	2.1	30	290	1.2	28	103	2.9	29	72	2.1	30	75	0.5	28	120	1.2
500.....	30	238	2.9	30	258	2.2	29	74	1.5	27	280	2.3	29	68	4.7	30	218	1.3	30	154	1.6	29	82	2.1	30	290	1.2	28	103	2.9	29	72	2.1	30	75	0.5	28	120	1.2
1,000.....	30	238	2.9	30	258	2.2	29	74	1.5	27	280	2.3	29	68	4.7	30	218	1.3	30	154	1.6	29	82	2.1	30	290	1.2	28	103	2.9	29	72	2.1	30	75	0.5	28	120	1.2
1,500.....	30	238	2.9	30	258	2.2	29	74	1.5	27	280	2.3	29	68	4.7	30	218	1.3	30	154	1.6	29	82	2.1	30	290	1.2	28	103	2.9	29	72	2.1	30	75	0.5	28	120	1.2
2,000.....	30	237	3.0	30	258	2.2	25	62	2.0	27	271	6.1	19	229	0.5	27	250	0.5	29	219	3.4	23	102	0.4	30	256	0.9	26	99	2.5	23	82	2.4	28	6	0.3	24	320	2.4
2,500.....	30	232	3.5	30	257	3.4	23	354	1.5	21	275	9.2	17	260	1.2	23	248	5.8	29	221	5.4	18	32	0.6	30	213	4.4	24	100	2.1	20	79	1.7	25	313	1.1	23	285	3.7
3,000.....	30	230	4.2	30	244	5.0	22	323	2.2	20	279	10.0	17	228	1.4	20	256	6.4	29	230	6.7	16	318	1.2	29	226	4.2	22	108	2.4	18	57	1.6	23	306	2.1	20	281	3.8
4,000.....	30	233	5.7	30	247	7.1	19	287	3.1	14	276	11.1	10	228	2.8	13	295	8.3	29	241	9.0	12	297	2.9	28	252	6.0	22	124	1.9	16	42	1.9	19	294	5.6	12	303	2.6
5,000.....	28	246	8.8	28	256	9.0	16	271	4.5	11	275	12.8	10	228	2.8	11	290	11.1	29	246	10.2	11	311	3.5	23	256	8.7	20	171	1.0	11	352	2.5	15	304	6.6	10	306	9.4
6,000.....	27	258	12.0	25	258	10.1	15	279	7.8	10	275	12.8	10	228	2.8	11	290	11.1	29	246	10.2	11	311	3.5	23	256	8.7	20	171	1.0	11	352	2.5	15	304	6.6	10	306	9.4
8,000.....	22	266	17.1	21	261	15.3	11	280	10.3	10	277	10.2	10	228	2.8	11	290	11.1	29	246	10.2	11	311	3.5	23	256	8.7	20	171	1.0	11	352	2.5	15	304	6.6	10	306	9.4
10,000.....	15	263	19.7	13	270	19.4	10	277	10.2	10	277	10.2	10	228	2.8	11	290	11.1	29	246	10.2	11	311	3.5	23	256	8.7	20	171	1.0	11	352	2.5	15	304	6.6	10	306	9.4
12,000.....	12	269	25.5	10	277	10.2	10	277	10.2	10	277	10.2	10	228	2.8	11	290	11.1	29	246	10.2	11	311	3.5	23	256	8.7	20	171	1.0	11	352	2.5	15	304	6.6	10	306	9.4
14,000.....	12	269	25.5	10	277	10.2	10	277	10.2	10	277	10.2	10	228	2.8	11	290	11.1	29	246	10.2	11	311	3.5	23	256	8.7	20	171	1.0	11	352	2.5	15	304	6.6	10	306	9.4

Altitude (meters) m. s. l.	Oakland, Calif. (8 m.)			Oklahoma City, Okla. (396 m.)			Omaha, Nebr. (306 m.)			Phoenix, Ariz. (338 m.)			Rapid City, S. Dak. (982 m.)			St. Louis, Mo. (181 m.)			St. Paul, Minn. (225 m.)			San Antonio, Tex. (240 m.)			San Diego, Calif. (15 m.)			Sault Ste. Marie, Mich. (225 m.)			Seattle, Wash. (116 m.)			Spokane, Wash. (603 m.)			Washing- ton, D. C. (24 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity			
Surface.....	30	278	4.7	28	154	5.0	30	177	1.8	30	239	0.4	27	203	0.6	30	177	0.9	27	200	2.5	29	83	4.8	30	274	3.1	26	232	1.3	30	242	1.6	29	224	1.6	29	107	1.2
500.....	29	288	3.6	28	153	5.2	30	193	3.0	30	222	1.1	27	202	0.6	30	207	1.3	27	200	3.7	29	79	5.3	30	281	3.2	26	214	2.8	29	232	2.2	29	225	3.0	28	77	0.9
1,000.....	28	274	1.6	28	163	5.8	28	199	5.8	30	208	1.6	27	202	0.6	30	212	2.3	26	215	4.9	27	88	4.4	29	268	1.6	25	226	4.2	26	201	2.6	28	218	2.7	27	314	0.7
1,500.....	27	225	1.6	28	170	4.9	27	213	6.9	30	188	2.2	27	217	1.2	30	247	2.6	23	222	6.0	23	101	3.															

RIVER STAGES AND FLOODS FOR SEPTEMBER 1946

By C. R. JORDAN

Precipitation during September was heavy in the northern States from the Rocky Mountains eastward to the Great Lakes and in New York. It was also above normal in Arizona, along the Gulf Coast, and along the coastal sections of the middle Atlantic States. More than three times the normal rainfall was reported in central Arizona, southern Texas, and western South Dakota. It was dry from Texas and Oklahoma northeastward through Missouri, the Ohio Valley, and the southern Lakes region; and along the Pacific Coast.

A severe flood occurred on the San Antonio River in Texas, and some light overflow was reported in the Missouri River tributaries in Kansas. Only light flooding was reported at a few scattered points elsewhere throughout the country.

Missouri Basin.—Flood stages were reached on the Republican, Solomon, Smoky Hill, and Saline Rivers in Kansas on one or more occasions during September. The Republican River reached light to moderate flood stages to below Clay Center, Kans., on the 6-7th and again on the 14-15th.

Severe overflow occurred along the Solomon River on the 8th and again from the 15-20th. At Beloit, Kans., where the bankfull stage is 18 feet, a crest of 29.3 feet occurred on the 8th, and 28.6 on the 15th. At Minneapolis, Kans., a crest of 31.9 feet, 5.9 feet above bankfull occurred on the 8th. This was one of the greatest overflows of record at Minneapolis. At Niles, a crest of 30.12 feet occurred on the 8th, one of the greatest overflows of record for that point. Considerable damage was done to growing crops, highways, and bridges.

The Smoky Hill River also overflowed moderately from Abilene to its mouth from the 10th to the 14th.

The Saline River overflowed twice at Tescott, with a crest of 29.1 feet on the 9th and another of 26.8 on the 15th. The crest on the 9th was one of the highest stages ever reached; there was considerable damage to crops, highways, and bridges.

Flood in Texas.—The greatest flood since September 1921 occurred in the vicinity of San Antonio, Tex. Several lives were lost and property damage amounted to several millions of dollars. On September 25, excessive rainfall occurred over most sections of San Antonio, with a 24-hour measurement of 3.33 inches at the Weather Bureau office. Again on Sept. 26-27, heavy rainfall fell in San Antonio, with 6.93 inches measured at the Weather Bureau office. Most of the rain, 6.61 inches, fell within a period of 8 hours, from 8 p. m., Sept. 26, to 4 a. m., Sept. 27. Reliable measurements at other points indicate that

heavier amounts fell over the central and south sections of the city. It is estimated that about 11.50 inches of rainfall occurred over the larger portion of the city. The Olmos Dam, built after the 1921 flood, saved much of the business district of the city from heavy flooding. The U. S. Geological Survey reports that the peak of the flood at their gaging station in San Antonio was 15.3 feet as compared with a peak of 20.14 feet in 1941.

Several uncontrolled creeks caused serious damage to property in sections of the city. At Falls City, downstream from San Antonio, the river reached a record stage, 5.4 feet higher than the flood of 1921. Precipitation was not so heavy below Falls City, and the intensity of the flood crest lessened as it moved downstream.

FLOOD STAGE REPORT FOR SEPTEMBER 1946

[All dates in September unless otherwise specified]

River and station	Flood stage	Above flood stages— dates		Crest ¹	
		From—	To—	Stage	Date
ATLANTIC SLOPE DRAINAGE					
Waccamaw: Conway, S. C.-----	Feet 7	Aug. 31	-----	Feet 7.6	3
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Raccoon: Van Meter, Iowa-----	13	8	9	16.2	9
Missouri Basin					
Solomon:					
Beloit, Kans.-----	18	7	11	29.3	8
		14	16	28.6	15
Minneapolis, Kans.-----	26	7	13	31.9	8
		18	18	27.9	18
Niles, Kans.-----	24	7	14	30.1	8
		18	20	27.4	20
Saline: Tescott, Kans.-----	25	7	11	29.1	9
		15	16	26.8	15
Smoky Hill:					
Abilene, Kans.-----	22	9	15	25.5	10
Enterprise, Kans.-----	26	10	15	25.6	12
Republican:				28.9	13-14
Guide Rock, Nebr.-----	10	7	7	10.9	7
		14	14	10.9	14
Scandia, Kans.-----	10	7	7	10.2	7
		14	14	10.6	14
Concordia, Kans.-----	8	7	7	8.8	7
		14	14	8.2	14
Clay Center, Kans.-----	15	7	9	18.6	7
		15	15	15.2	15
Wakefield, Kans.-----	11	7	8	11.0	7
WEST GULF OF MEXICO DRAINAGE					
San Antonio: Falls City, (nr) Tex.-----	12	Aug. 30 27	1 29	15.7 33.8	Aug. 31 29
Guadalupe:					
Gonzales, Tex.-----	20	Aug. 30	Aug. 31	22.4	Aug. 31
Cuero, Tex.-----	23	1	1	23.1	1
Victoria, Tex.-----	21	Aug. 31	4	27.5	3
		29	(?)		
Nueces: Three Rivers, Tex.-----	37	Aug. 31	2	38.5	1

¹ Provisional.² Continued at end of month.

CLIMATOLOGICAL DATA FOR SEPTEMBER 1946

CONDENSED CLIMATOLOGICAL SUMMARY OF TEMPERATURE AND PRECIPITATION BY SECTIONS

[For description of tables and charts, see Review, January 1943, p. 15]

In the following table are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and

lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

Section	Temperature								Precipitation					
	Section average	Departure from the normal	Monthly extremes						Section average	Departure from the normal	Greatest monthly		Least monthly	
			Station	Highest	Date	Station	Lowest	Date			Station	Amount	Station	Amount
Alabama.....	73.4	-2.3	Talladega	98	3	2 stations	45	11	In. 6.08	+2.74	Robertsdale	12.35	Waterloo	1.92
Arizona.....	74.1	+1.3	2 stations	113	12	Fort Valley	29	24	In. 2.54	+1.20	Organ Pipe Cactus, N. Mex.	8.93	San Simon	.18
Arkansas.....	72.4	-1.9	Searcy	100	10	Lead Hill	33	30	In. 1.48	-1.86	Bradford	4.55	Harrison	.12
California.....	68.5	+8	Greenland Ranch	116	12	Elery Lake	14	17	In. .20	-23	Elk Valley	1.42	51 stations	.00
Colorado.....	58.8	+7	2 stations	100	13	Dillon	10	23	In. .94	.43	Cumbres	3.50	2 stations	.00
Florida.....	79.1	-3	Naples	98	23	Crestview	56	30	In. 6.93	+25	Apalachicola	22.55	Nittaw	3.01
Georgia.....	73.0	-2.4	Washington	96	9	2 stations	47	1	In. 3.71	+08	Brunswick Airport	12.02	Dawson	1.35
Idaho.....	55.9	-1.2	Swan Falls	99	13	3 stations	16	27	In. 1.25	+18	Nerperce	3.27	2 stations	.07
Illinois.....	66.9	-9	Mt. Vernon	96	16	Rockford Airport	32	30	In. 2.07	-1.60	Galena	7.29	Wheaton	.51
Indiana.....	66.8	-4	2 stations	95	16	Frankfort	30	30	In. 1.35	-1.94	Rochester	3.41	Mauzy	.17
Iowa.....	63.2	-7	2 stations	95	5	Sibley	26	29	In. 4.94	+1.13	Independence	11.39	Knoxville	1.56
Kansas.....	68.9	-8	Atwood	107	4	Tribune	27	23	In. 3.66	+80	Lincoln	12.60	Medicine Lodge	.32
Kentucky.....	68.4	-2.0	Owensboro	95	8	Mt. Sterling	36	30	In. 2.52	-38	Woodbury	4.48	Lovelandville	.80
Louisiana.....	77.0	-9	Lake Providence	99	4	Monroe	51	30	In. 4.06	+05	Port Sulphur	20.89	Jonesville	.18
Maryland-Delaware.....	68.0	+3	Cumberland, Md.	99	9	Oakland, Md.	30	15	In. 3.33	-03	Solomons, Md.	6.33	Western Port, Md.	1.83
Michigan.....	61.0	+6	2 stations	95	6	2 stations	21	13	In. 2.74	-45	Mott Island	8.75	Scottville	.80
Minnesota.....	57.1	-1.9	Beardsley	90	4	Grand Rapids	21	30	In. 4.78	+1.90	Austin	9.70	Brainerd	1.65
Mississippi.....	74.4	-1.5	Utica	97	5	Moorehead	47	30	In. 2.82	-26	Bay St. Louis	10.11	Vicksburg Airport	.22
Missouri.....	67.9	-1.4	Crystal City	97	26	2 stations	32	24	In. 2.25	-1.80	Oregon	9.77	Siloam Springs, L. O.	.25
Montana.....	54.3	-9	Jordan	98	14	Lima	10	23	In. 2.24	+86	Sentinel Butte Pass	4.77	Missoula (near)	.49
Nebraska.....	63.8	-5	Purdum	104	4	Bridgeport	25	23	In. 3.64	+1.56	Falls City	9.31	Potter	.37
Nevada.....	62.5	+1.1	Overton	109	11	2 stations	16	17	In. .31	-10	Kyle Canyon R. S.	2.14	14 stations	.00
New England.....	62.0	+1.7	Norwalk, Conn.	92	19	2 stations	24	13	In. 3.79	.00	West Rutland, Mass.	7.54	Presque Isle, Maine	.66
New Jersey.....	67.5	+1.6	9 stations	92	19	2 stations	34	15	In. 3.34	-44	Chatham	6.22	Pleasantville	1.43
New Mexico.....	66.1	+1.7	Oro Grande	102	3	Elizabethtown	18	23	In. 1.85	+09	Hobbs	7.87	Tres Piedras	.00
New York.....	63.1	+1.8	Port Jervis	94	19	2 stations	26	13	In. 3.79	+26	Dobbs Ferry	7.37	Jamestown	.80
North Carolina.....	69.6	-1.4	Louisburg	98	9	Mount Mitchell	30	30	In. 3.91	-14	Southport	18.66	Lawinburg	.48
North Dakota.....	56.3	-5	2 stations	97	14	Parshall	18	28	In. 2.52	+95	Edgeley	6.65	Tagus	.39
Ohio.....	65.7	.0	Hillsboro	100	8	Mansfield	32	13	In. 1.42	-1.50	Norwalk	3.96	Findlay	.29
Oklahoma.....	72.4	-1.8	Alva	103	5	Kenton	30	23	In. 2.08	-1.13	Farris	6.96	Meeker	.19
Oregon.....	56.7	-1.2	2 stations	97	23	Fremont	14	27	In. 1.00	-18	Willow Creek	4.14	Montgomery Ranch	.14
Pennsylvania.....	64.3	+1	5 stations	96	17	Titusville	26	26	In. 3.29	-16	Mt. Pocono	7.27	Union City	.02
South Carolina.....	72.8	-1.7	Walterboro	104	10	Calhoun Falls	42	30	In. 2.44	-1.64	Eutawville	7.94	Yamassee	.69
South Dakota.....	60.4	-1.1	Academy	100	4	Ralph	22	29	In. 4.13	+2.57	Brookings	7.30	Ludlow	2.16
Tennessee.....	69.8	-1.7	3 stations	95	17	Rugby	38	1	In. 3.50	+43	Etowah	6.65	Paris	1.29
Texas.....	76.5	-8	Pecos	105	4	Dalhart	36	23	In. 4.30	+1.31	San Antonio	15.78	Naples	.41
Utah.....	61.5	+7	Zion National Park	102	13	Woodruff	14	23	In. .30	-71	Monticello	2.26	11 stations	.00
Virginia.....	67.9	-7	Columbia	100	9	Dante	30	1	In. 2.98	-24	Norfolk	5.94	Emory	.82
Washington.....	58.3	-7	Richland	94	10	3 stations	21	22	In. 1.37	-28	R. N. P. Carbon River Ent.	6.42	Dallesport	.15
West Virginia.....	65.5	+1.2	Charleston	100	9	Canaan Valley	23	15	In. 2.27	-60	Kermit	4.55	White Sulphur Springs	.55
Wisconsin.....	59.5	-8	Racine	94	6	Mellen	20	29	In. 4.41	+69	Viroqua	9.45	Kenosha	.60
Wyoming.....	55.3	+5	Lagrange	96	14	Bondurant	8	29	In. 1.67	+51	Colony	4.75	Evanston	.16
Alaska (August).....	50.5	-2.2	3 stations	84	10	Puntilla	22	23	In. 3.72	+19	Little Port Walter	13.32	Puntilla	.35
Hawaii.....	74.9	+5	Wai'anae	94	13	Haleakala Ranger Station	23	28	In. 3.28	-2.76	Puchakamoa	23.50	6 stations	.00
Puerto Rico.....	77.6	-7	Utusado	95	13	Fajardo	58	6	In. 7.31	-1.21	Rio Blanco	17.34	Barceloneta	1.42

¹ Other dates also.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR SEPTEMBER 1946

District and station	Elevation of instruments			Pressure			Temperature of the air										Precipitation			Wind															
	Barometer above sea level	Thermometer above ground	Anemometer above ground	Station	Sea level	Departure from normal	Temperature from normal					Temperature from normal					Total	Departure from normal	Greatest in 24 hours	Days with 0.01 inch or more	Average hourly velocity	Prevailing direction	Maximum velocity			Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms			
							Mean	Maximum	Date	Mean minimum	Date	Mean	Maximum	Date	Greatest daily range	Miles per hour							Direction	Date											
NEW ENGLAND																																			
Eastport	75	67	85	1,018.0	1,020.7	+3.8	62.8	58.6	83	19	66	43	12	51	32	199	50	80	1.90	+0.3	9.17	10	7.6	s.	30	e.	30	10	7	13	5.4	0.0	0		
Greenville, Maine	1,070	6	41	982.1	1,021.7	...	56.7	56.7	83	19	71	31	4	42	42	246	51	88	7.45	+3.7	6.01	9	2.9	ne.	16	...	11	7	13	10	...	0	1		
Portland, Maine	103	5	43	1,016.6	1,020.3	+2.7	60.8	60.8	87	19	71	35	14	50	34	146	54	85	2.90	+2.1	8.0	6	7.2	s.	33	...	30	11	8	11	5.4	0.0	1		
Concord	289	6	45	1,010.2	1,021.0	+3.0	61.0	61.0	86	19	75	32	13	47	43	142	54	86	4.29	+8.2	2.99	7	5.8	se.	20	...	11	12	7	11	5.4	0.0	2		
Burlington	403	5	51	1,005.1	1,020.0	+2.0	62.4	62.4	86	19	75	32	13	50	37	129	54	82	3.45	+0.1	3.96	10	7.4	s.	27	...	6	13	9	8	4.6	0.0	1		
Boston	124	33	62	1,015.9	1,020.7	+2.4	65.8	65.8	88	19	74	45	30	58	27	57	56	77	2.04	-1.1	1.19	6	9.3	sw.	30	...	10	10	9	11	5.5	0.0	1		
Nantucket	12	4	34	1,020.0	1,020.7	+2.1	63.2	63.2	88	19	70	50	1	56	25	75	60	92	4.16	+1.7	2.16	10	10.6	ne.	30	...	13	8	4	15	6.5	0.0	1		
Block Island	26	11	46	1,019.6	1,020.7	+2.1	64.5	64.5	80	20	71	48	30	59	22	48	60	88	1.90	-1.1	1.09	7	11.8	sw.	35	...	30	10	10	10	5.4	0.0	0		
Providence	159	46	60	1,014.9	1,020.7	+2.4	66.6	66.6	84	19	76	45	30	57	29	50	58	86	1.70	-1.5	5.95	5	6.6	ne.	24	...	30	10	7	13	5.5	0.0	1		
Hartford	139	5	44	1,014.6	1,020.7	+2.4	65.7	65.7	87	19	78	40	15	54	39	52	58	86	2.36	-1.1	1.45	4	6.2	s.	22	...	24	9	11	10	5.4	0.0	2		
New Haven	107	5	39	1,016.6	1,020.7	+2.4	65.6	65.6	85	19	75	46	14	56	30	46	58	83	2.97	-3.1	1.67	5	6.6	ne.	19	...	21	13	8	9	4.9	0.0	3		
MIDDLE ATLANTIC																																			
Albany	97	26	40	1,016.6	1,020.3	+2.0	63.9	63.9	90	19	77	37	14	51	41	91	54	80	3.10	0.0	...	7	6.2	s.	25	...	24	15	7	8	5.1	0.0	3		
Binghamton	871	60	79	989.2	1,020.7	+3.4	64.0	64.0	87	18	76	37	14	52	36	102	54	90	4.55	+1.4	1.98	9	4.7	ne.	23	...	10	4	16	10	6.2	0.0	4		
New York	314	415	454	1,008.8	1,020.0	+1.4	66.8	66.8	89	19	78	47	30	62	24	19	57	73	2.41	-1.0	0.91	4	10.2	n.	43	...	30	13	9	8	4.8	0.0	1		
Harrisburg	374	30	49	1,006.8	1,020.7	+2.1	67.0	67.0	94	19	79	43	14	55	35	47	56	79	1.55	-1.5	0.71	7	6.0	w.	26	...	30	10	13	7	4.7	0.0	3		
Philadelphia	114	5	57	1,016.3	1,020.3	+1.7	71.4	71.4	91	19	80	50	14	63	25	12	60	79	3.22	+1.2	2.08	4	6.7	e.	20	...	21	12	12	6	4.4	0.0	1		
Reading	323	47	306	1,008.8	1,020.7	...	68.4	68.4	92	9	80	44	15	57	35	29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scranton	805	72	104	991.5	1,020.3	+2.0	65.4	65.4	90	19	77	40	15	54	34	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Atlantic City	52	37	172	1,018.0	1,019.6	+1.3	68.6	68.6	92	11	74	47	30	63	23	19	64	88	1.93	-7.7	0.96	6	13.6	ne.	38	...	13	9	7	14	6.0	0.0	6		
Trenton	190	89	107	1,013.5	1,020.3	...	69.1	69.1	92	10	74	47	14	59	29	24	58	74	1.95	-1.4	1.32	5	6.8	n.	24	...	30	10	10	6	4.0	0.0	1		
Baltimore	123	100	215	1,015.9	1,020.3	+1.7	71.0	71.0	92	10	80	50	30	62	28	11	60	76	3.98	+6.1	1.58	7	8.0	n.	30	...	30	17	8	5	3.9	0.0	0		
Washington	112	56	100	1,016.3	1,020.3	+1.7	71.3	71.3	92	9	82	49	30	60	35	11	60	75	3.95	+7.2	2.19	7	5.7	s.	25	...	30	11	12	7	4.9	0.0	1		
Cape Henry	18	8	54	1,018.6	1,019.3	...	73.2	73.2	94	10	79	57	15	67	22	0	66	84	3.41	+6.1	1.26	8	12.3	ne.	37	...	30	7	10	13	6.4	0.0	4		
Lynchburg	686	4	50	995.6	1,020.3	+1.7	68.1	68.1	94	9	78	47	1	58	32	32	59	30	2.66	-6.1	1.02	9	7.4	ne.	28	...	30	10	7	13	5.6	0.0	5		
Norfolk	91	80	125	1,016.6	1,020.0	+2.0	72.7	72.7	93	9	78	57	30	67	20	1	64	84	5.94	+2.7	3.04	9	9.1	ne.	25	...	30	4	10	16	6.9	0.0	4		
Richmond	144	11	52	1,014.2	1,019.3	+1.0	71.0	71.0	95	9	81	47	15	61	31	11	62	85	1.80	-1.4	0.69	11	6.4	ne.	23	...	30	10	11	9	5.4	0.0	1		
SOUTH ATLANTIC																																			
Asheville	2,253	77	92	941.8	1,020.3	+2.0	73.0	73.0	92	9	77	45	1	56	36	35	58	83	3.57	-0.6	...	7	6.4	se.	23	...	30	3	11	16	6.3	0.0	3		
Charlotte	779	63	86	991.5	1,019.3	+1.0	71.4	71.4	90	8	80	52	30	63	28	6	60	78	2.85	-1.2	1.34	11	6.3	ne.	20	...	10	7	8	15	6.4	0.0	3		
Greensboro	586	6	56	988.8	1,020.7	...	69.6	69.6	89	9	80	48	15	59	32	20	60	83	2.03	-1.2	1.43	8	7.5	ne.	27	...	30	8	8	14	6.0	0.0	1		
Hatteras	11	5	50	1,018.0	1,018.3	+3.7	74.4	74.4	91	8	81	62	30	70	14	0	68	86	6.60	+2.0	2.23	11	12.0	ne.	34	...	11	6	5	19	7.1	0.0	5		
Raleigh	376	5	69	1,006.1	1,019.6	+1.3	71.5	71.5	91	9	81	51	30	62	28	5	62	86	3.55	-1.1	1.30	11	6.3	ne.	18	...	10	8	8	14	5.9	0.0	2		
Wilmington	72	73	107	1,015.9	1,018.3	+2.4	74.0	74.0	90	9	82	57	30	66	24	0	68	90	12.26	+7.8	7.71	12	8.2	ne.	28	...	19	7	12	11	5.8	0.0	8		
Charlotte	48	11	92	1,015.9	1,017.6	+1.7	75.6	75.6	90	11	82	64	14	70	20	0	66	88	3.31	-1.2	1.24	11	9.5	n.	40	...	25	9	10	11	5.9	0.0	3		
Columbia, S. C.	347	70	91	1,006.1	1,018.6	+1.0	74.4	74.4	91	25	84	56	30	65	29	1	63	78	1.36	-2.1	1.56	12	7.3	ne.	19	...	28	8	10	12	6.0	0.0	2		
Greenville, S. C.	1,040	18	36	982.4	1,019.3	...	70.9	70.9	89	8	80	50	30	62	28	10	60	77	2.33	-1.4	0.90	9	9.0	ne.	35	...	30	8	7	15	6.3	0.0	1		
Augusta	182	62	77	1,011.9	1,018.3	+6.4	74.8	74.8	91	11	84	58	17	66	28	0	64	78	2.43	-9.1	1.52	9	5.3	ne.	17	...	8	6	15	6.4	0.0	4			
Savannah	65	73	152	1,015.2	1,017.6	+2.4	76.0	76.0	91	11	84	62	3	68	25	0	68	86	1.65	-3.8	0.62	10	8.7	n.	21	...	5	5	12	13	6.7	0.0	2		
Jacksonville	43	86	110	1,015.2	1,016.9	+1.0	77.6	77.6	91	24	84	65	6	71	20	0	72	88	3.26	-4.1	0.78	15	7.3	ne.	24	...	5	1	18	11	6.9	0.0	7		
FLORIDA																																			
PENINSULA																																			
Key West	21	10	64	1,013.5	1,014.2	+0.7	81.2	81.2	91	2	88	72	6	78	15	0	74	78	3	...	...	16	7.5	e.	19	...	8	3	14	13	6.7	0.0	11
Miami	25	242	249	1,013.9	1,014.6	-1.0	79.8	79.8	91	1	88	4	85	69	6	75	15	0	74	86	4.58	-4.1	1.07	20	10.3	e.	39	...	8	2	18	10	6.4	0.0	15
Tampa	35	6	43	1,014.2	1,015.6	+1.7	80.6	80.6	93	24	89	69	13	72	21	0	72	88	7.88	+1.5	1.38	22	6.1	ne.	28	...	23	2	17	11	6.4	0.0	18		
EAST GULF																																			
Atlanta	1,173	33	72	984.1	1,018.0	+1.1	73.0	73.0	92	10	82	57	30	64	28	14	61	78	2.72	-3.1	1.98	9	9.3	e.	34	...	22	7	11	12	6.2	0.0	0		
Macon	370	79	87	1,004.7	1,018.0	+1.1	73.0	73.0	92	10	82	57	30	64	28	7	64	82	4.11	+9.2	2.22	10	5.6	ne.	18	...	11	8	5	17	6.8	0.0	4		
Thomasville	273																																		

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR SEPTEMBER 1946—Continued

District and station	Elevation of instruments			Pressure		Temperature of the air										Precipitation		Wind				Total degree days	Mean temperature of the dew point	Mean relative humidity	Total	Departure from normal	Greatest in 24 hours	Days with .001 inch or more	Average hourly velocity	Prevailing direction	Maximum velocity		Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
	Barometer above sea level	Thermometer above ground	Anemometer above ground	Station	Sea level	Departure from normal	Mean	Departure from normal	Maximum	Date	Mean maximum	Minimum	Date	Mean minimum	Greatest daily range			Miles per hour	Direction																				
OHIO VALLEY AND TENNESSEE—CON.																																							
Evansville ¹	431	11	40	1,003.1	1,019.0	+1.0	67.6	—	63	7	80	42	30	55	37	34	58	82	1.65	—1.7	.95	3	8.1	nw.	25	sw.	23	10	12	8	5.5	.0	.0	1					
Indianapolis ¹	823	5	54	989.2	1,018.6	+1.0	66.2	—	61	8	79	38	30	53	40	53	54	72	1.00	—	.87	3	7.9	sw.	31	w.	10	10	12	8	5.1	.0	.0	0					
Terre Haute ²	575	68	149	998.3	1,019.3	+1.0	68.3	—	61	8	80	42	30	57	35	30	66	78	1.42	—2.2	.84	5	7.3	e.	23	w.	10	12	11	7	4.7	.0	.0	3					
Cincinnati ²	627	11	51	996.6	1,019.6	+1.3	70.0	+2.9	93	7	82	46	30	59	34	14	66	80	1.29	—1.4	1.20	4	4.7	e.	23	w.	10	13	8	9	4.8	.0	.0	1					
Columbus ²	822	60	110	990.5	1,020.0	+1.7	67.6	+1.1	93	8	79	43	30	56	34	35	54	64	1.02	—1.6	.60	5	7.3	s.	28	sw.	10	15	8	7	4.2	.0	.0	0					
Dayton ¹	1,003	6	55	983.7	1,020.0	—	67.2	+1.3	89	8	79	39	30	53	28	44	62	68	.90	—1.9	.78	5	8.9	s.	35	w.	10	12	8	10	5.0	.0	.0	0					
Elkins ¹	1,947	4	45	952.6	1,022.0	+3.4	61.8	—	88	8	78	35	17	46	46	124	82	84	3.00	—2.1	1.31	8	4.5	se.	27	nw.	10	11	9	10	5.3	.0	.0	4					
Parkersburg	637	77	84	997.0	1,020.0	+1.4	68.0	+1.7	92	8	81	45	16	55	39	21	56	73	1.00	—1.8	.57	7	4.7	se.	26	nw.	10	10	12	8	5.1	.0	.0	4					
Pittsburgh ¹	842	39	54	989.8	1,020.0	+1.4	67.1	+2.4	92	8	78	43	30	56	32	40	54	72	1.27	—1.3	.49	7	8.3	s.	31	w.	10	13	10	7	4.7	.0	.0	2					
LOWER LAKES																																							
Buffalo ¹	768	34	96	992.2	1,020.0	+2.0	64.4	+2.8	90	28	76	42	15	53	34	109	54	76	2.38	—0.6	.56	9	10.7	s.	37	sw.	10	11	12	7	4.8	.0	.0	3					
Canton	448	10	61	1,003.4	1,019.3	+1.0	61.5	+2.7	87	20	74	32	12	49	37	167	50	73	3.90	+1.6	1.92	10	6.6	sw.	26	sw.	10	13	8	9	4.6	.0	.0	2					
Ogawa	335	71	85	1,007.8	1,020.3	+2.3	63.4	+1.9	85	20	72	43	4	54	29	112	54	77	4.17	+1.5	1.63	10	8.2	se.	31	n.	30	17	6	7	3.9	.0	.0	2					
Rochester ¹	523	5	69	1,001.0	1,020.3	+2.3	64.0	+3.5	89	28	76	38	13	52	35	110	54	81	2.71	+1.3	.77	10	7.4	sw.	32	sw.	10	13	9	8	4.6	.0	.0	3					
Syracuse ¹	506	5	57	999.0	1,020.3	+2.0	63.4	+3.1	89	20	76	36	13	50	39	123	54	82	2.83	+1.1	.92	9	7.3	sw.	26	w.	11	13	7	10	5.1	.0	.0	2					
Erie ²	714	57	81	994.2	1,020.0	+2.0	66.3	+2.7	88	6	75	46	26	58	32	73	54	79	1.82	—1.6	.95	7	7.4	se.	22	sw.	10	12	10	8	4.4	.0	.0	3					
Cleveland ¹	762	27	54	992.2	1,019.6	+1.6	66.8	+3.0	89	6	78	40	4	55	38	62	54	73	1.88	—1.4	.75	8	8.8	s.	33	nw.	30	14	9	7	4.4	.0	.0	4					
Sandusky	629	5	67	996.6	1,019.6	+1.6	67.0	+1.7	89	6	77	46	4	57	38	44	52	72	1.20	—1.8	.78	7	7.8	e.	22	sw.	10	16	8	6	3.9	.0	.0	3					
Toledo ¹	628	5	47	996.6	1,020.0	+2.0	65.1	+2.0	92	6	79	37	30	51	42	79	52	74	.37	—2.4	.10	6	8.9	sw.	29	sw.	10	13	13	4	4.8	.0	.0	1					
Fort Wayne ¹	857	5	33	987.8	1,019.0	—	64.6	+1.5	90	6	78	36	30	51	42	87	52	72	1.41	—1.6	.87	4	6.8	sw.	28	w.	10	10	15	5	4.7	.0	.0	3					
Detroit ¹	730	5	78	993.6	1,019.6	+1.6	65.2	+2.8	90	6	77	41	30	54	34	85	53	74	1.65	—1.2	.58	5	7.9	s.	31	nw.	10	13	12	5	4.2	.0	.0	3					
UPPER LAKES																																							
Alpena	609	5	89	996.6	1,019.3	+2.4	58.2	+1.6	80	20	67	38	3	49	27	216	51	82	3.33	+1.4	1.39	13	9.1	se.	31	s.	5	8	11	11	5.6	.0	.0	6					
Escanaba	612	51	72	995.3	1,019.0	+1.7	55.9	+1.2	73	6	64	34	3	48	28	272	50	82	2.43	—	.91	8	9.8	s.	31	s.	24	8	11	11	5.8	.0	.0	1					
Grand Rapids ¹	707	70	244	992.9	1,018.6	+1.0	65.4	+2.7	89	9	77	40	3	54	30	94	51	74	1.46	—2.1	.64	6	10.3	s.	45	sw.	24	12	14	4	4.5	.0	.0	3					
Lansing ²	878	5	90	987.5	1,019.3	+1.0	62.8	+1.4	89	6	75	36	3	51	33	128	50	70	1.76	—1.2	1.11	9	6.9	s.	27	s.	24	12	6	4	4.5	.0	.0	5					
Marquette	734	44	73	990.2	1,017.6	+1.6	57.6	+1.1	83	18	66	33	12	49	29	201	48	76	2.78	—	.92	13	8.5	s.	26	s.	27	4	12	14	6.5	.0	.0	4					
Sault Sainte Marie ¹	614	11	52	995.9	1,019.0	+2.4	55.7	+1.7	84	17	66	34	12	45	32	286	48	88	3.03	—	1.03	12	10.0	se.	27	nw.	10	10	13	6	6.1	.0	.0	5					
Chicago ¹	673	5	36	994.2	1,018.6	+1.3	65.6	+1.7	91	6	78	40	30	54	33	83	54	74	2.01	—1.2	.88	5	8.3	s.	33	sw.	24	10	18	2	4.1	.0	.0	3					
Green Bay	617	5	32	995.6	1,018.3	+1.7	60.3	+1.1	83	16	71	36	3	50	33	185	49	76	2.81	—	.71	11	7.5	s.	30	sw.	24	10	10	5	5.2	.0	.0	5					
Milwaukee ¹	681	33	66	993.6	1,018.6	+1.7	61.7	+1.7	89	6	72	38	25	52	34	140	52	76	1.28	—2.0	.64	10	11.5	sw.	48	sw.	24	9	12	9	5.8	.0	.0	4					
Duluth ²	1,133	5	47	974.9	1,016.6	+1.4	55.0	+1.1	78	15	64	34	2	46	30	304	46	81	4.20	+1.9	1.14	13	10.3	ne.	38	nw.	27	11	8	11	5.5	.0	.0	4					
NORTH DAKOTA																																							
Fargo ¹	940	6	47	980.0	1,014.6	—	56.9	—0.1	83	15	68	31	29	47	39	267	46	76	3.35	+1.1	1.88	9	13.3	s.	36	w.	27	5	12	13	6.2	.0	.0	2					
Bismarck ¹	1,677	5	43	953.6	1,013.9	—	58.1	+1.8	93	14	71	28	28	45	40	263	45	69	2.23	+1.0	1.05	10	12.2	nw.	36	s.	16	1	19	10	5.4	.0	.0	3					
Devils Lake	1,478	11	44	960.7	1,014.2	+1.3	56.0	+1.1	93	16	67	30	28	45	35	315	44	73	3.04	+1.4	1.63	9	8.8	s.	27	s.	16	6	11	13	6.4	.0	.0	4					
Grand Forks ¹	832	4	41	984.1	1,014.6	—	55.2	—	85	16	66	31	29	44	36	310	46	78	3.13	—	2.48	7	—	—	—	—	—	—	—	—	—	.0	.0	.0	0				
Williston	1,878	42	50	946.2	1,012.9	—	56.4	—2.2	94	14	68	29	28	45	46	292	42	64	1.33	—	2.70	9	7.1	w.	26	w.	16	8	9	13	6.2	T	.0	.0	4				
UPPER MISSISSIPPI																																							
Minneapolis-St. Paul ¹	919	43	74	982.7	1,015.9	+1.3	64.8	—0.2	85	4	70	34	29	50	36	195	50	77	3.96	+0.3	2.57	10	11.0	se.	33	se.	27	10	10	10	4.9	.0	.0	4					
Springfield, Minn. ¹	1,025	4	42	979.3	1,016.6	+1.0	60.0	—	87	4	71	33	29	49	44	196	50	77	3.96	+0.3	2.57	11	—	—	—	—	—	—	—	—	—	.0	.0	.0	0				
La Crosse ¹	714	5	29	991.2	1,017.6	+1.3	59.2	—2.2	82	6	70	32	30	48	32	200	52	83	6.11	+2.1	2.18	14	8.1	se.	34	s.	5	8	12	10	5.8	.0	.0	2					
Madison ²	974	70	78	983.1	1,018.6	+1.7	62.4	—	83	6	72	41	25	53	26	132	50	77	4.60	+0.2	1.03	10	7.3	s.	20	sw.	5	10	12	8	5.2	.0	.0	3					
Charles City	1,015	10	51	980.7	1,017.6	+1.7	64.8	—2.5	86	5	72	34	29	50	36	170	54	75	3.47	+1.1	1.06	12	6.3	s.	20	sw.	5	12	6	12	5.1	.0	.0	3					
Moline ¹	606	6	50	996.3	1,018.6	+1.7	64.8	+1.9	86	5	77	36	30	52	35	99	54	75	3.47	+1.1	1.06	12	6.3	s.	20	sw.	5	12	6	12	5.1	.0	.0	3					
Des Moines ²	860	5	99	—	1,018.0	+1.4	65.0	—	81	5	76	37	30	54	35	97	54	76	3.09	—	.62	10	9.0	se.	32	s.	27	9	13	6	4.7	.0	.0	3					
Dubuque	699	60	79	992.9	1,018.3	+1.4	63.6	+1.4	86	6	74	40	25	53	28	114	54	80	3.95	+1.9	4.91	12	4.9	se.	17	se.	22	9	15	6	4.8	.0	.0	3					
Burlington ¹	702	4	36	992.6	1,018.0	+1.4	65.8	+1.4	89	8	79	36	30	53	36	75	54	78	2.15	—																			

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR SEPTEMBER 1946—Continued

[illegible]

¹ Data are airport records.
² Barometric data (adjusted to old city elevation) and hygrometric data from airport;
otherwise city office records.
³ Observations taken bihourly.

⁴ Pressure (adjusted to old city elevation), temperature, and hygrometric data from airport; otherwise city office records.
⁵ Temperature and precipitation from city records; other data from airport.
⁶ Data from airport, except wind.

NOTE.—Except as indicated by notes 1, 2, 4, and 5 data in table are city office records.

SEVERE LOCAL STORMS FOR SEPTEMBER 1946

[The table herewith contains such data as have been received concerning severe local storms that occurred during the month. A revised list of tornadoes will appear in the United States Meteorological Yearbook]

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
Minnesota, west-central counties.	Sept. 1946 5	7 a. m.-1 p. m.	120	1	\$900,000	Thundersqualls	About 206 barns, 81 outbuildings, 27 silos, 2 creameries and a bulk oil warehouse demolished; many houses, town and country buildings, windmills and farm machinery damaged; poles and wires down; many trees uprooted; much poultry and livestock killed; loss in growing crops. Airplane pilot killed when his plane was hurled to the ground. 1 person injured. Many places struck by lightning; 4 cows killed near Maple Plain. Loss in tobacco, corn, and gardens, \$15,000; property damaged, \$750; path 5 miles long.
Madison, Wis., and vicinity.	5	12:06-12:21 p. m.	11		15,750	Hail	Much loss in corn and soybeans.
Le Roy, Minn., vicinity of.	5	3:30 p. m.			70,000	do	Principal damage from wind to barns and other farm buildings scattered in the area.
Holdrege, Nebr., vicinity of.	5	5-6 p. m.	12		9,000	Hail and windsquall	Barn storing 140 tons of hay burned when struck by lightning.
Neenah, Wis., vicinity of.	5	5:20 p. m.			6,000	Electrical	Trees and poles down, disrupting utility services; some homes and farm buildings damaged; loss not estimated.
Oconto, Lena, and Peshtigo, Wis., and vicinities.	5	7 p. m.				Wind	Streets and basements flooded; considerable damage to merchandise stored in basements; lowlands inundated; loss in growing crops. At Austin 6.74 inches of rain occurred in less than 12 hours.
Austin, Minn., and vicinity.	5	P. m.			20,000	Heavy rain	Silo and barn containing hay, grain, and a heifer destroyed by fire.
Appleton, Wis., vicinity of.	5	do			8,000	Electrical	Barn storing lumber and furniture burned when struck by lightning.
Eau Claire, Wis., vicinity of.	5	do			5,000	do	Barn and contents burned.
Fond du Lac, Wis.	5	do			6,000	do	Hallstones, size of walnuts, broke windows, neon signs, and damaged roofs. Basements and ground floors of some stores and dwellings flooded.
Englewood, Colo.	6	4-5:30 p. m.			8,000	Hail	\$500 loss in growing crops; \$10,000 damage to 5 airplanes; \$5,000 damage to roofs, automobiles, trees, and shrubs.
Douglas, Wyo.	6	4:05-5:55 p. m.			15,500	Hail	Much loss in gardens; streets and basements flooded.
Springer, N. Mex.	7	4 p. m.				Heavy hail and rain	Utility lines down; power off for 5 hours; trees uprooted.
Milton, Pa.	8	5:15-5:45 p. m.				Thunderstorm	100 trees in Riverside Cemetery and 50 in Victory Park destroyed.
Albion, Mich., vicinity of.	10	7:27-7:31 a. m.	300	0		Tornado	Damage confined to northern suburbs of Portland. Minor damage to 2 residences; 2 barns leveled, and a roof torn from garage.
Portland, Maine.	10	2:50-3:10 p. m.			1,000	Tornadoic wind, electrical	Shade and pine trees felled. Some evidence of counterclockwise wind movement.
Lock Haven, Pa.	10	8:20 p. m.			20,000	Thunderstorm	Airplane, hangar, and other buildings at flying school damaged.
Allendale, S. C.	11	6:30 p. m.	800		3,000	Thunderstorm	Trees and power lines down.
Chester, S. C.	11	6:15 p. m.			500	do	Damage from wind, including broken windows; trees uprooted; roofs of several houses blown off; telephone and power lines blown down.
Fort Stanton, N. Mex.	11	1 p. m.				Heavy hail	Several flimsy buildings housing private planes blown from their foundations, 1 collapsing, damaging a plane.
Franklin, Owen, and Henry Counties, Ky.	13	do	15		200,000	Hail and wind	Loss in apple and peach crops.
Richland County, Mont., eastern portion.	16	8:15 p. m.	8	0	300,000	Tornado	Loss mostly in tobacco. Hailstorm lasted about 30 minutes. In some areas the ground was covered with about 5 inches of pellets, which remained unmelted for several hours.
Butte, Mont. and vicinity.	16-17	5:00 a. m. on 16th-2:00 p. m. on 17th.		0	5,500	Heavy snow	Three separate storm paths converged into one. Minor injuries to at least four people. Standing corn and grain shocks blown away; shelter belts, orchards, hay stacks, and feed yards damaged. Nearly every building over 20-mile path in Montana at least slightly damaged. Power and communications disrupted; 0.79 inch precipitation reported at Fairview. Tornado continued into western North Dakota.
Roswell, N. Mex.	18	P. m.				Heavy rain	Record 24-hour September snowfall for Butte. Total snowfall 10.6 inches; greatest depth on the ground, 6.5 inches. Total precipitation, 1.77 inches—1.30 inches from snow. Power and communication lines as well as trees and shrubbery damaged by wet, clinging snow.
Casa Grande to Gila Bend, Ariz.	18-19	Continuous			5,000	Rain	Flash flood washed out highway bridge, inundated lowlands, and flooded basements.
Clifton to Duncan, Ariz.	18-19	do			2,500	do	Damage to highway 84, necessitating considerable repairs and leveling of surface.
North Carolina, tidewater counties from South Carolina border northward to Pamlico River, N. C.	19-20	P. m. on 19th-p. m. on 20th.				Tropical disturbance.	Highway damaged.
Lander, Wyo.	21	5 p. m.			1,000	Wind	Storm developed off the South Carolina coast and moved inland near North Carolina border on the night of the 19th, then moved northeastward, leaving the State in the vicinity of Northampton County on the night of the 20th. Rains of 8 to 12 inches were general over the tidewater counties from the South Carolina border northward to the Pamlico River. Roads flooded; telephone service interrupted to some beach resorts due to high winds.
Lake Delton, Wisc., vicinity of.	22	5:55-6:10 p. m.	27		10,000	Tornadoic wind	Maximum wind velocity of 60 miles per hour for a 5-minute period, and an extreme velocity of 70 miles recorded. Damage to broken electric poles and wires amounted to \$1,000; undetermined amount of damage to trees and shrubs.
Escanaba, Mich.	24	12:46-12:47 p. m., C. S. T.	1-200	0	350,000	Tornado	Damage confined to McBoyle Airport: hangar unroofed; 3 small airplanes wrecked; 6 automobiles damaged; several trees blown down. Storm moved from southwest to northeast; rotary winds observed.
Muskegon, Mich.	24	P. m.			60,000	Wind	Coal unloading derrick destroyed; collier, houses, windows, trees, wires, and flagpoles damaged. Funnel cloud observed; trees on ground in swivel pattern.
Portage County, Wis., eastern portion.	26-27	During night and about noon.			16,700	Electrical	Estimated that 15,000 bushels of apples blown from trees in Oceana County.
Bethel, N. Mex.	28	5:30 p. m.			12,000	Heavy hail and rain	Lightning struck, causing 4 barns and contents of stored crops to burn; loss in cattle, \$700.
Beaver County, Pa.	29	P. m.				Hail and rain	Much loss in small grains, cotton, grain sorghums, peanuts, and truck crops.
Gallipolis, Ohio, vicinity of.	29					Hail	Hail the size of marbles damaged crops, gardens, and homes, and covered the ground to the depth of several inches. Heavy rains washed out newly sown wheat fields.

¹ Miles instead of yards.

LATE STORM REPORTS FOR AUGUST 1946

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
Sheridan County, Mont., northwestern portion.	Aug. 1946 6	8 p. m.	12			Heavy hail.	Much loss in wheat and barley; path 4 miles long.
Fergus County, Mont., northeastern portion.	6-8					High winds.	Loss in 30 percent of grain, estimated at thousands of dollars.
Benchland and Stanford, Mont., vicinities of.	10-11		880			Heavy hail.	10 to 40 percent loss in wheat; path 3 miles long.
Musselshell County, Mont., northwestern portion.	11	7:30 p. m.	12		5,000	Hail.	Much loss in wheat; path 10 miles long.
Broadus, Mont., southeast of.	12	A. m.	20			Heavy hail and rain.	Much damage to pastures and ranges; Bridges, culverts, and roads washed out. On the ground at one point hail accumulated to the depth of several feet; path 25 miles long.
Broadus, Mont., 15 to 20 miles north.	12	8 p. m.	12-4			Heavy hail.	Considerable loss in wheat over a path 10 miles long.
Mildred, Mont.	12	do.	14			Hail.	Much loss in corn over a path 15 miles long.
Winnett, Mont., vicinity of.	12					do.	Considerable crop loss.
Custer County, Mont., southern portion.	13	P. m.	14		12,000	Heavy hail.	Much loss in alfalfa, wheat, and on rangeland over a path 22 miles long.
Hill county, Mont., northeastern portion.	14	2 p. m.	880-2,520			Hail.	Much loss in barley and wheat; path 15 miles long.
Malta, Mont., vicinity of.	14	3-4 p. m.	12		7,000	do.	Loss in sugar beets and small grain; path 6 miles long.
Blaine County, Mont., northern portion.	14	P. m.			25,000	do.	Loss in wheat and barley; path 12 miles long.
Richland County, Mont., southern portion.	14	do.	12		5,000	do.	Loss in wheat, barley, and corn; path 6 miles long.
Roy, Mont., vicinity of.	16					do.	Loss mostly in rangelands; crop loss up to 50 percent.
Lewistown, Mont., 8 to 9 miles northwest.	19-20					do.	Much loss in wheat and oats.
Daniels County, Mont., western portion.	22	4 p. m.			7,500	do.	Much loss in wheat; some damage to shelter belts.

¹ Miles instead of yards.

SOLAR RADIATION AND SUNSPOT DATA FOR SEPTEMBER 1946

[Solar Radiation Investigations Section, I. F. HAND in Charge]

Explanations of the tables and references to descriptions of instruments, stations, and methods of observations and to summaries of data are given in the MONTHLY WEATHER REVIEW, vol. 72, page 43, January 1944. A list of the pyrheliometric stations is given on page 45 of the same REVIEW.

SOLAR RADIATION OBSERVATIONS

TABLE 1.—Solar radiation intensities during September 1946

[Gram calories per minute per square centimeter of normal surface]

Date	Sun's zenith distance										75th mer. time
	7:30 a. m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	1:30 p. m.
	Air mass										
	A. M.					*1.0	P. M.				
e.	5.0	4.0	3.0	2.0			2.0	3.0	4.0	5.0	e.

MADISON, WIS.

	mb.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	mb.
Sept. 3	9.8	0.58	0.70	0.81	0.98	1.18					9.8
Sept. 4	11.0	.53	.62	.77	.95	1.13					13.7
Sept. 9	19.0			.71	.88	1.09					21.1
Sept. 16	12.7		.40	.48	.69	1.09					19.0
Sept. 17	13.2	.29	.38	.57	.79	1.16					17.0
Sept. 18	10.6	.35	.44	.57	.83	1.22					13.2
Sept. 19	12.7	.36	.50	.73	.79						17.0
Sept. 21	11.8	.58	.71	.90	1.07	1.37					13.7
Sept. 25	7.2	.87	1.01	1.13	1.19	1.44					8.7
Sept. 27	14.8	.60	.75	.92	1.14						15.3
Means		.52	.61	.76	.93	1.21					
Departures		-.19	-.24	-.22	-.20	-.16					

LINCOLN, NEBR.

	mb.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	mb.
Sept. 4	21.8	0.60	0.71	0.84	1.03						22.6
Sept. 5	23.4			.86	1.01	1.26	0.92				23.4
Sept. 10	12.3				1.05	1.40	1.28	1.21	1.14	1.10	12.7
Sept. 11	12.3		.94	1.03	1.21	1.38					15.8
Sept. 14	16.4					1.25					17.7
Sept. 16	13.7	.60	.08	.79	.97	1.25					15.3
Sept. 17	14.2		.81	.96	1.08	1.31					16.4
Sept. 20	10.2		1.01	1.11	1.27						12.7
Sept. 23	7.2				1.24	1.39					8.4
Sept. 24	8.1		1.01	1.09	1.23	1.47	1.19	1.03	.90	.79	10.6
Sept. 25	8.7		.83	1.01	1.22	1.38	1.12				14.6
Sept. 26	19.0	.62	.75	.88	1.08	1.36					19.6
Sept. 30	6.6	.70	.79	.90	1.11	1.45	1.23	1.06	.90	.79	7.4
Means		.63	.84	.95	1.12	1.35	1.15	1.10	.98	.89	
Departures		-.11	.00	-.02	-.02	-.06	.00	+.12	+.15	+.17	

CLIMAX, COLO.

	mb.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	mb.
Sept. 3							1.24	1.12	1.02		
Sept. 4						1.48	1.33	1.18	1.08	1.00	
Sept. 5							1.30				
Sept. 6					1.40	1.48			1.09	1.00	
Sept. 7						1.41	1.50				
Sept. 8					1.44	1.53	1.40	1.25	1.14	1.02	
Sept. 9					1.42	1.58	1.42	1.30	1.12	1.08	
Sept. 10						1.45	1.40	1.29	1.17	1.08	
Sept. 11							1.36	1.21	1.02		
Sept. 12					1.32						
Sept. 13					1.31	1.53	1.37	1.22	1.11	1.02	
Sept. 14					1.30	1.43	1.53				
Sept. 16					1.27	1.43					
Sept. 19					1.36	1.49	1.62	1.31	1.13	1.12	
Sept. 20					1.39	1.53	1.60	1.42	1.21	1.10	
Sept. 21						1.44	1.54	1.42	1.30	1.19	
Sept. 22							1.44	1.34	1.20	.98	
Sept. 23					1.43	1.53	1.59	1.46	1.29		
Sept. 24					1.34	1.47	1.56	1.44	1.21	1.16	
Sept. 25					1.33	1.46	1.52	1.41	1.26	1.14	
Sept. 26						1.40		1.30	1.20		
Sept. 27					1.30	1.42	1.50	1.32			
Sept. 28					1.30	1.44	1.56	1.39	1.24	1.10	
Sept. 29					1.35	1.48	1.56	1.40	1.24	1.14	
Sept. 30					1.25	1.43	1.50				
Means					1.33	1.44	1.53	1.40	1.28	1.13	
Departures											

SOLAR RADIATION OBSERVATIONS

TABLE 1.—Solar radiation intensities during September 1946—Continued

Date	Sun's zenith distance										75th mer. time
	7:30 a. m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	1:30 p. m.
	Air mass										
	A. M.					*1.0	P. M.				
e.	5.0	4.0	3.0	2.0			2.0	3.0	4.0	5.0	e.

TABLE MOUNTAIN, CALIF.

	mb.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	mb.
Sept. 1					1.45						
Sept. 5					1.43						
Sept. 6					1.48						
Sept. 7					1.46						
Sept. 8					1.48						
Sept. 9					1.49						
Sept. 16					1.42						
Sept. 19		1.09	1.18	1.28	1.41	1.55					
Sept. 20					1.43						
Sept. 21					1.42						
Sept. 22					1.42						
Sept. 23					1.35						
Sept. 25					1.40						
Sept. 26					1.39						
Sept. 28					1.36						
Sept. 29					1.23						
Sept. 30					1.32						
Means		(1.09)	(1.18)	(1.28)	1.41	(1.55)					

BLUE HILL, MASS.

Sept. 1	13.0		0.66	0.78	0.91	1.30			0.42	0.30	15.3
Sept. 3	11.5					1.39	0.88	0.74		.52	12.0
Sept. 4	11.1	0.77	.88	1.01	1.17	1.43	1.14	.97	.74	.61	12.0
Sept. 5	14.0						1.00	.80	.66		15.2
Sept. 6	15.2		.66	.86			1.10	.91	.76	.65	15.1
Sept. 7	16.5						1.32				17.8
Sept. 13	9.1					1.53	1.33	1.19	1.05	.94	9.2
Sept. 15	9.9					1.46	1.25	1.10	1.00	.88	11.0
Sept. 16	9.4	.96	1.04	1.15	1.30	1.41	1.16	.94	.80	.69	10.4
Sept. 17	14.2	.63		.87	1.02	1.37	.79	.67	.58	.46	16.4
Sept. 18	16.4					1.25	.89	.67	.53	.45	18.5
Sept. 19	18.3	.62	.72	.86	1.07	1.30	.94	.79	.64	.54	16.6
Sept. 20	15.0	.61	.71	.83	1.01	1.14			.53	.44	17.9
Sept. 25	13.8	.63	.73	.89	1.05	1.45					16.3
Sept. 27	10.2	.69	.80	.92	1.07		1.07	.88	.71	.51	16.0
Sept. 28	14.3						.86	.63	.46	.33	15.1
Means		.70	.78	.91	1.08	1.35	1.03	.86	.68	.56	
Departures		-.07	-.09	-.08	-.05	-.03	-.09	-.07	-.10	-.10	

BOSTON, MASS.

	mb.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	mb.
Sept. 5	13.7				0.92						15.3
Sept. 16	10.6				1.21		0.90				10.2
Sept. 17	14.8				.77	.90		.65			15.8
Sept. 18	16.5	0.41	0.43								16.5
Sept. 19	19.0			.81	.95		.83				16.5
Sept. 20	15.8	.55	.63	.76	.82		.95				16.5
Sept. 25	14.2			.79	1.02		.84				15.8
Means		(.48)	(.53)	.84	.97		.83				
Departures		-.03	.00	-.03	-.04		-.03				

RATIO, BOSTON/BLUE HILL, ON COMPARABLE DATES

		.90	.89	.91	.90		.82				

*Extrapolated.

TABLE 2.—Daily totals and weekly means of solar radiation (direct + diffuse) received on a horizontal surface

[Gram calories per square centimeter]

Date	Washington, D. C.	Madison, Wis.	Lincoln, Nebr.	East Lansing, Mich.	New York, N. Y.	Fresno, Calif.	Fairbanks, Alaska	Columbia, Mo.	Boston, Mass.	Nashville, Tenn.	Twin Falls, Idaho	La Jolla, Calif.	Riverside, Calif.	Blue Hill, Mass.	Newport, R. I.	State College, Pa.	Put-in-Bay, Ohio	East Wareham, Mass.	Davis, Calif.	Tooele, Utah	New Orleans, La.	Toronto, Canada	Ithaca, N. Y.	Boulder, Colo.
1948	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.
Sept. 3.....	576	479	379	432	454	384	582	476	315	215	573	598	513	303	526	580	580	544	460	370	403	461	461	
Sept. 4.....	541	499	358	467	515	609	114	518	519	89	573	558	569	532	566	600	592	592	561	435	524	408	408	
Sept. 5.....	445	190	538	435	339	612	577	395	513	503	554	580	445	218	556	508	580	580	616	535	470	408	408	
Sept. 6.....	360	453	263	348	216	620	471	478	498	461	514	601	544	457	537	501	571	571	627	540	438	440	440	
Sept. 7.....	516	82	272	282	402	630	450	413	493	499	555	549	475	523	457	391	568	568	596	541	321	74	74	
Sept. 8.....	554	152	474	135	308	583	548	221	265	462	504	539	191	277	380	389	569	569	627	418	97	420	420	
Sept. 9.....	515	430	190	260	206	607	444	87	70	522	440	475	128	152	389	255	567	567	629	428	335	579	579	
Means.....	501	326	353	337	349	578	455	370	382	393	530	557	409	352	487	460	570	570	588	467	370	399	399	
Departures..	+107	-52	-83	-1	-17	+17	-----	+20	-16	-109	+42	+63	+29	-63	+116	+42	+34	+34	+10	+41	-10	-----	-55	
Sept. 10.....	522	246	599	276	301	605	521	287	255	432	501	559	198	176	440	228	555	555	555	201	195	548	548	
Sept. 11.....	455	278	548	350	430	599	599	286	545	495	427	504	318	382	546	495	560	560	596	450	343	269	269	
Sept. 12.....	409	467	109	400	278	588	466	243	534	493	493	478	211	125	514	372	537	537	571	502	440	400	400	
Sept. 13.....	370	516	181	245	519	561	531	426	502	503	428	508	469	423	258	347	547	547	588	533	520	556	556	
Sept. 14.....	576	273	504	328	419	564	452	272	464	465	433	522	302	268	531	448	561	561	392	436	463	535	535	
Sept. 15.....	590	409	469	343	520	581	542	386	439	315	473	544	472	504	528	420	496	496	507	289	379	265	265	
Sept. 16.....	564	385	516	362	462	491	524	423	326	198	471	488	507	508	509	454	566	566	407	265	392	435	435	
Means.....	498	368	418	329	418	570	519	332	438	414	461	515	354	341	446	395	549	549	517	382	390	432	432	
Departures..	+118	+26	0	+21	+60	+40	-----	+21	+72	-58	+6	+49	-13	-38	+36	+17	+42	+42	-22	+14	+46	-22	-22	
Sept. 17.....	504	413	483	364	411	582	417	358	258	209	339	451	470	458	474	439	568	568	568	144	404	451	451	
Sept. 18.....	453	412	444	339	362	590	399	317	282	487	289	461	441	449	429	402	554	554	585	290	408	68	68	
Sept. 19.....	398	366	115	387	394	558	415	375	476	490	453	500	480	445	501	387	530	530	588	318	376	554	554	
Sept. 20.....	227	379	529	285	297	540	526	343	257	467	371	432	463	444	383	350	521	521	514	305	359	392	392	
Sept. 21.....	370	449	476	420	45	545	563	299	275	414	405	492	377	342	124	402	531	531	559	198	102	452	452	
Sept. 22.....	394	342	65	309	426	529	334	215	131	487	419	460	236	315	340	248	500	500	562	35	253	486	486	
Sept. 23.....	181	434	509	86	95	480	578	58	191	467	193	462	128	132	105	146	438	438	567	54	95	540	540	
Means.....	361	399	374	313	290	542	462	281	263	432	353	406	371	369	337	339	520	520	563	188	285	420	420	
Departures..	-6	+45	-30	+15	-36	+51	-----	+4	-81	+1	-53	+2	+18	+21	-5	-2	+40	+40	+69	-146	-5	-----	-5	
Sept. 24.....	117	227	532	394	41	510	539	109	295	449	157	468	151	102	141	493	473	473	488	226	421	523	523	
Sept. 25.....	525	440	511	411	402	500	533	181	480	433	177	454	226	132	413	456	483	483	555	232	444	502	502	
Sept. 26.....	478	398	467	340	392	514	462	370	482	413	223	448	431	422	453	449	495	495	532	226	372	495	495	
Sept. 27.....	418	320	141	384	238	505	513	379	418	443	292	439	445	400	420	438	503	503	519	241	361	436	436	
Sept. 28.....	222	101	60	264	295	511	407	318	307	450	335	432	370	382	441	382	489	489	550	247	339	68	68	
Sept. 29.....	194	435	512	205	122	478	532	316	122	402	412	315	370	280	180	97	462	462	522	210	102	476	476	
Sept. 30.....	431	443	490	284	22	465	531	30	503	265	235	166	64	49	348	372	317	317	494	404	439	465	465	
Means.....	341	338	388	340	216	498	503	243	372	408	262	389	294	252	342	388	460	460	523	255	354	424	424	
Departures..	-5	+39	+32	+57	-92	+42	-----	-22	+44	-24	-111	-54	-44	-82	+2	+66	+16	+16	+69	-112	+90	-----	+41	

ACCUMULATED DEPARTURES ON SEPT. 30, 1946

+4,067	+4,137	-1,736	+2,618	-8,967	+5,033	-----	-----	+259	+133	-2,933	-----	+161	-2,478	-3,388	+4,858	-----	-----	+11,172	-938	-----	-----	-----	+2,128
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POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR
SEPTEMBER 1946

By LUCY T. DAY

[Equatorial Division, U. S. Naval Observatory]

[Communicated by the Superintendent, U. S. Naval Observatory.] All measurements and spot counts were made at the Naval Observatory from plates taken at the observatories indicated. Difference in longitude is measured from the central meridian, positive toward the west. Latitude is positive toward the north. Areas are corrected for foreshortening and expressed in millionths of Sun's hemisphere. For each day under Mount Wilson group number, longitude, latitude, area of spot or group, and spot count, are included respectively: number of groups, assumed longitude of center of the disk, assumed latitude of center of the disk, total areas of spots and groups, and total spot count.

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR
SEPTEMBER 1946—Continued

Date	East- ern stand- ard time	Mount Wilson group No.	Heliographic				Area of spot or group	Spot count	Plate qual- ity	Observatory
			Dif- ference in longi- tude	Lon- gi- tude	Lat- tude	Dis- tance from center of disk				
1946 Sept. 5	h m									
	12 32	8184	-56	321	-15	60	194	1	F	U. S. Naval.
		8184	-51	326	-16	55	24	1		
		8184	-46	331	-16	60	61	2		
		8182	-25	352	+18	28	61	6		
		8182	-20	357	+17	22	170	1		
		8182	-10	7	-37	47	6	3		
		8181	-8	9	+19	15	12	2		
		8179	-1	16	+13	6	24	3		
		8179	+1	18	+14	7	194	1		
		8179	+4	21	+13	7	48	3		
		8177	+45	62	+16	46	73	5		
		8177	+54	71	+17	54	388	1		
		8175	+70	87	-11	72	194	2		
		(7)		(17)	(+7)		1,449	31		
	6 11 41	8184	-44	320	-15	49	170	1	F	Do.
		8184	-37	327	-15	43	218	10		
		8184	-33	331	-15	40	61	3		
		8182	-12	352	+18	17	61	4		
		8182	-7	357	+16	12	170	1		
		8179	+12	16	+13	13	48	6		
		8179	+14	18	+14	17	194	1		
		8177	+58	62	+16	58	48	2		
		8177	+67	71	+17	67	388	3		
		8175	+87	91	-11	88	48	1		
		(5)		(4)	(+7)		1,406	32		
	7 9 45	8184	-31	321	-16	39	121	1	G	Mt. Wilson.
		8184	-27	325	-15	35	6	1		
		8184	-26	326	-16	36	97	17		
		8184	-20	332	-16	31	24	4		
		8182	+1	353	+18	11	6	2		
		8182	+7	359	+17	12	73	1		
		8179	+26	18	+14	28	24	9		
		8179	+27	19	+15	28	170	1		
		8185	+52	44	+16	52	6	1		
		8177	+70	62	+17	71	24	2		
		8177	+81	73	+19	81	388	1		
		(5)		(352)	(+7)		939	40		
	8 9 35	8184	-19	320	-16	30	121	2	G	Do.
		8184	-15	324	-16	28	48	15		
		8184	-11	328	-18	27	12	5		
		8184	-8	331	-15	25	61	6		
		8187	-4	335	+29	23	6	3		
		8182	+19	358	+16	21	73	7		
		8186	+22	1	+13	23	12	3		
		8179	+40	19	+15	40	158	1		
		(5)		(339)	(+7)		491	42		
	9 10 34	(*)	-85	240	+12	85	48	1	G	U. S. Naval.
		(*)	-85	240	+16	85	36	1		
		8184	-4	321	-15	23	73	5		
		8184	+1	326	-15	24	48	24		
		8184	+6	331	-15	23	24	2		
		8182	+32	357	+17	34	48	4		
		8186	+33	358	+12	33	24	1		
		8186	+38	3	+13	39	6	2		
		8179	+51	16	+15	51	194	1		
		(6)		(325)	(+7)		501	41		
	10 11 5	8190	-63	248	-18	68	12	3	F	Do.
		8189	-42	269	-14	46	24	11		
		8189	-40	271	-14	45	61	2		
		8188	-7	304	-24	33	6	2		
		(*)	-7	304	+27	22	6	3		
		8184	+9	320	-14	23	24	11		
		8184	+15	326	-15	27	24	5		
		8184	+19	330	-15	29	24	3		
		8182	+45	356	+16	46	12	4		
		8186	+51	2	+13	51	6	1		
		8179	+65	16	+15	65	194	1		
		(8)		(311)	(+7)		393	46		
	11 10 22	8191	-55	244	+11	55	12	5	G	Do.
		8190	-49	250	-20	54	6	1		
		8190	-47	252	-19	53	73	7		
		8189	-29	270	-15	37	61	11		
		8189	-25	274	-15	33	194	1		
		8184	+21	320	-15	31	6	5		
		8184	+30	329	-16	37	12	4		
		8179	+65	4	+13	65	12	3		
		8179	+79	18	+15	79	145	1		
		(5)		(299)	(+7)		521	38		

See footnotes at end of table.

Date	East- ern stand- ard time	Mount Wilson group No.	Heliographic				Area of spot or group	Spot count	Plate qual- ity	Observatory
			Dif- ference in longi- tude	Lon- gi- tude	Lat- tude	Dis- tance from cen- ter of disk				
1946 Sept. 1	<i>h m</i> 11 54	8182	-72	358	+17	73	121	1	F	U. S. Naval.
		8181	-57	13	+18	57	24	3		
		8179	-51	19	+15	51	194	1		
		8180	-39	31	+7	39	12	2		
		8178	-27	43	+15	29	12	1		
		8177	-3	67	+18	12	194	10		
		8177	+3	73	+18	12	339	1		
		8175	+7	77	-12	21	97	8		
		8175	+13	83	-11	23	194	6		
		8172	+27	97	-24	41	48	3		
		8172	+33	103	-23	44	73	1		
		8173	+35	105	+27	40	73	10		
		8173	+41	111	+26	44	97	6		
		8174	+45	115	+23	47	194	11		
		8174	+50	120	+26	52	73	1		
		8170	+54	124	+9	54	436	1		
		8160	+70	140	+16	71	6	1		
		(12)		(70)	(+7)		2,187	67		
2	10 34	8182	-60	357	+17	60	121	6	VG	Do.
		8183	-50	7	-38	63	12	2		
		8181	-46	11	+18	48	24	5		
		8179	-39	18	+15	40	170	1		
		8178	-15	42	+15	17	24	3		
		8178	-12	45	+14	14	24	6		
		8177	+4	61	+17	11	12	8		
		8177	+7	64	+17	13	121	3		
		8177	+10	67	+17	15	12	4		
		(*)	+13	70	-13	24	12	2		
		8177	+15	72	+17	18	339	1		
		8175	+21	78	-12	28	97	15		
		8175	+28	85	-11	34	194	11		
		(*)	+35	92	+20	36	12	7		
		8172	+45	102	-23	53	73	1		
		8173	+49	106	+27	51	48	7		
		8173	+58	115	+22	59	291	9		
		8173	+60	117	+25	61	291	3		
		8174	+62	119	+23	63	97	12		
		8174	+65	122	+25	66	61	3		
		8170	+68	125	+9	68	436	1		
		(13)		(57)	(+7)		2,471	110		
3	10 41	8184	-88	316	-15	88	145	1	G	Do.
		8184	-75	329	-17	78	97	2		
		8182	-47	357	+17	48	194	3		
		8183	-39	5	-38	58	48	4		
		8181	-31	13	+18	33	48	8		
		8179	-26	18	+15	27	194	1		
		8180	-10	34	+7	11	12	6		
		8178	-1	43	+14	7	12	3		
		8177	+20	64	+17	22	109	4		
		8177	+25	69	+17	27	12	8		
		8177	+29	73	+17	30	291	1		
		8175	+34	78	-13	40	48	9		
		8175	+41	85	-11	45	24	6		
		8175	+42	86	-12	45	194	1		
		8172	+60	104	-25	67	73	1		
		8174	+70	114	+22	71	582	15		
		8173	+71	115	+25	72	97	7		
		8170	+80	124	+8	80	436	1		
		(13)		(44)	(+7)		2,616	81		
4	10 32	8184	-71	320	-15	73	145	1	F	Do.
		8184	-65	326	-16	67	12	1		
		8184	-60	331	-17	64	48	3		
		8182	-34	357	+16	36	194	5		
		8183	-25	6	-37	50	48	6		
		8181	-22	9	+16	24	12	3		
		8181	-18	13	+16	21	12	4		
		8181	-16	15	+18	20	24	3		
		8179	-12	19	+14	14	194	1		
		8178	+16	47	+12	17	12	3		
		8177	+32	63	+16	34	73	5		
		8177	+35	66	+16	37	24	2		
		8177	+40	71	+16	40	291	3		
		(*)	+46	77	-13	50	24	9		
		8175	+55	86	-12	58	267	5		
		8172	+72	103	-24	78	97	1		
		8174	+80	111	+18	80	97	1		
		8173	+85	116	+22	85	388	2		
		(12)		(31)	(+7)		1,992	58		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR
SEPTEMBER 1946—Continued

Date	East- ern stand- ard time	Mount Wilson group No.	Heliographic	Area of spot or group	Spot count	Plate qual- ity	Observatory
			Dif- fer- ence in longi- tude	Lon- gi- tude	Lat- tude	Dis- tance from cen- ter of disk	
1946 Sept. 12	A M		°	°	°	°	
	10 35	8193	-88	197	+19	88	194
		8192	-65	220	+17	65	6
		8191	-45	240	+11	45	12
		8191	-40	245	+12	40	121
		8190	-35	250	-18	43	12
		8190	-31	254	-19	40	97
		8189	-17	268	-15	28	73
		8189	-11	274	-15	25	194
		8184	+47	332	-19	52	61
		(6)	(285)	(+7)			770
							49
13	10 18	8193	-85	187	+23	85	970
		8193	-75	197	+19	76	194
		8193	-61	211	+25	62	12
		8192	-50	222	+18	50	12
		8191	-32	240	+11	33	24
		8191	-29	243	+12	29	315
		8191	-26	246	+12	27	218
		8190	-21	251	-18	33	121
		8189	-5	267	-15	23	73
		8189	+1	273	-15	24	218
		8184	+61	333	-19	67	24
		(6)	(272)	(+7)			2,181
							55
14	11 6	8193	-73	186	+22	73	170
		8193	-68	191	+23	69	776
		8193	-67	192	+18	67	24
		8193	-64	195	+24	64	12
		8193	-60	199	+18	60	194
		8192	-36	223	+17	38	12
		8191	-16	243	+12	17	291
		8191	-10	249	+12	11	267
		8190	-8	251	-19	27	48
		8190	-5	254	-18	26	97
		8189	+8	267	-15	24	73
		8189	+13	272	-13	23	242
		8194	+26	285	-21	38	12
		(6)	(259)	(+7)			2,218
							119
15	12 6	8195	-80	165	+19	80	97
		8193	-54	191	+21	55	824
		8193	-46	199	+18	47	145
		8192	-21	224	+17	23	61
		8191	-1	244	+11	4	291
		8191	+4	249	+12	5	291
		8190	+8	253	-19	28	145
		8189	+24	269	-14	32	12
		8189	+30	275	-14	36	242
		(6)	(245)	(+7)			2,108
							38
16	10 23	8195	-68	165	+19	69	97
		8195	-65	168	+17	65	6
		8193	-42	191	+21	43	485
		8193	-39	194	+23	41	145
		8193	-39	194	+19	40	194
		8193	-33	200	+18	35	145
		8196	-33	200	+15	34	12
		8192	-7	226	+17	12	12
		8191	+10	243	+11	11	339
		8191	+17	250	+12	18	388
		8190	+20	253	-19	33	73
		8189	+37	270	-14	42	6
		8189	+41	274	-14	46	242
		(7)	(233)	(+7)			2,144
							55
17	10 24	8195	-55	164	+19	55	73
		8195	-51	168	+17	51	6
		8193	-30	189	+21	32	436
		8193	-27	192	+20	29	339
		8193	-23	196	+17	25	48
		8193	-21	198	+18	24	121
		8196	-20	199	+16	22	24
		8191	+23	242	+11	24	291
		8191	+27	246	+11	27	97
		8191	+30	249	+12	30	388
		8190	+30	249	-19	40	12
		(*)	+31	250	-29	47	12
		8189	+49	268	-14	53	6
		8189	+54	273	-14	58	242
		(7)	(219)	(+7)			2,095
							71

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR
SEPTEMBER 1946—Continued

Date	East- ern stand- ard time	Mount Wilson group No.	Heliographic	Area of spot or group	Spot count	Plate qual- ity	Observatory
			Dif- fer- ence in longi- tude	Lon- gi- tude	Lat- tude	Dis- tance from cen- ter of disk	
1946 Sept. 18	A M		°	°	°	°	
	10 30	8199	-80	120	+8	86	242
		8198	-80	126	+27	81	145
		8195	-40	166	+20	42	24
		8193	-17	189	+21	22	436
		8193	-14	192	+19	19	291
		8196	-9	197	+15	12	121
		8193	-8	198	+17	13	97
		8196	-5	201	+15	10	48
		8191	+37	243	+10	37	291
		8191	+40	246	+10	40	197
		8191	+42	248	+11	42	412
		(*)	+43	249	-30	56	24
		8189	+67	273	-14	70	194
		(8)	(206)	(+7)			2,422
							70
19	10 17	8199	-71	122	+7	71	242
		8198	-68	125	+26	69	145
		8197	-51	142	+23	52	12
		8195	-28	165	+17	29	6
		8193	-5	188	+21	15	388
		8193	-2	191	+19	12	242
		8193	+1	194	+18	11	97
		8193	+3	196	+17	11	24
		8193	+5	198	+14	10	24
		8193	+6	199	+17	12	97
		8196	+8	201	+15	11	24
		8191	+50	243	+10	50	291
		8191	+55	248	+10	55	436
		8189	+80	273	-14	82	194
		(8)	(193)	(+7)			2,222
							76
20	9 40	8199	-56	124	+7	56	218
		8198	-56	124	+26	58	145
		8198	-55	125	+25	57	16
		8195	-16	164	+19	20	24
		8193	+5	185	+23	17	12
		8193	+9	189	+21	17	727
		8193	+16	196	+20	20	24
		8193	+17	197	+16	20	48
		8193	+18	198	+17	21	73
		8196	+21	201	+15	23	24
		8191	+65	245	+13	65	291
		8191	+70	250	+13	70	436
		(6)	(180)	(+7)			2,038
							132
21	11 19	8201	-80	86	+24	81	6
		8201	-70	96	+24	71	6
		8200	-65	101	+25	66	12
		8200	-61	105	+25	62	24
		8198	-44	122	+25	46	121
		8199	-43	123	+6	43	218
		8198	-42	124	+24	44	24
		8197	-24	142	+23	29	12
		8195	+6	172	+22	16	24
		8193	+24	190	+20	27	436
		8193	+30	196	+15	31	97
		8196	+31	197	+14	32	24
		8191	+81	247	+10	81	582
		(9)	(166)	(+7)			1,586
							92
22	14 11	8205	-80	71	+19	80	194
		8204	-80	71	-10	81	97
		8203	-74	77	-16	76	24
		8201	-63	88	+19	64	48
		8202	-62	89	-15	65	12
		8200	-47	104	+25	40	48
		8199	-28	123	+6	28	218
		8198	-28	123	+25	32	97
		8197	-9	142	+22	18	97
		8197	-5	146	+21	14	97
		8195	+20	171	+21	24	12
		8193	+39	190	+20	40	339
		8193	+47	198	+16	47	48
		8196	+52	203	+14	52	12
		(12)	(151)	(+7)			1,343
							70

See footnotes at end of table.

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR
SEPTEMBER 1946—Continued

Date	East- ern stand- ard time	Mount Wilson group No.	Heliographic	Area of spot or group	Spot count	Plate qual- ity	Observatory
			Dif- fer- ence in longi- tude	Lon- gi- tude	Lat- tude		
					Dis- tance from center of disk		
1946 Sept. 23	A M						
	14 58	8205	-67	71	+19	67	194
		8204	-64	74	-8	66	97
		8203	-57	81	-17	61	121
		8203	-52	86	-16	56	97
		8201	-50	88	+18	50	24
		8202	-47	91	-16	52	12
		8200	-34	104	+24	37	145
		8200	-32	106	+24	35	97
		8207	-21	117	+21	25	12
		8198	-16	122	+24	23	73
		8199	-14	124	+6	14	218
		8197	-3	135	+23	17	12
		8197	+4	142	+22	16	146
		8197	+9	147	+21	17	242
		8193	+52	190	+21	52	73
		8193	+55	193	+18	55	24
		8193	+60	198	+17	60	48
		8196	+65	203	+15	65	6
		(12)	(138)	(+7)			1,640
							46
24	9 45	8210	-70	57	-15	72	12
		8205	-55	72	+20	55	145
		8204	-51	76	-8	52	61
		8203	-47	80	-17	53	145
		8203	-41	86	-17	48	61
		8201	-40	87	+20	42	12
		8200	-27	100	+26	33	194
		8200	-23	104	+26	29	73
		8207	-10	117	+21	17	12
		8208	-9	118	+13	11	11
		8198	-5	122	+26	20	97
		8199	-3	124	+7	3	206
		8197	+13	140	+22	20	194
		8197	+20	147	+21	23	291
		8206	+31	158	-14	38	12
		8206	+34	161	-14	40	24
		(*)	+41	168	+30	45	12
		8193	+65	190	+21	63	48
		8193	+72	199	+15	73	73
		(14)	(127)	(+7)			1,684
							126
25	10 36	8210	-55	59	-15	60	12
		8205	-41	73	+19	42	109
		8204	-38	76	-8	41	73
		8203	-37	77	-17	43	73
		8203	-29	85	-17	37	121
		8201	-25	89	+20	28	12
		8200	-13	101	+26	22	194
		8200	-9	105	+26	21	194
		(*)	-7	107	+33	26	6
		8207	+2	116	+20	13	24
		8198	+7	121	+25	19	73
		8199	+9	123	+6	9	206
		8212	+24	138	-25	40	12
		8197	+25	139	+21	28	73
		8197	+31	145	+21	33	582
		8206	+45	159	-15	50	242
		8211	+73	187	-15	76	48
		8193	+76	190	+20	76	48
		(15)	(114)	(+7)			2,102
							113
26	10 51	8205	-33	67	+21	35	12
		8213	-32	68	-43	57	24
		8205	-28	72	+19	30	61
		8204	-24	76	-9	29	73
		8203	-23	77	-18	33	48
		8203	-16	84	-17	29	170
		8200	+1	101	+26	20	267
		8200	+6	106	+25	19	242
		8207	+12	112	+21	19	12
		8198	+21	121	+25	27	61
		8199	+23	123	+6	23	206
		(*)	+25	123	-14	31	12
		8212	+39	139	-26	50	12
		8197	+40	140	+21	41	291
		8197	+47	147	+20	48	533
		8206	+59	159	-15	62	242
		8206	+63	163	-15	67	291
		(12)	(100)	(+7)			2,587
							106
27	10 20	8216	-85	2	-18	85	291
		8205	-19	68	+21	23	6
		8213	-19	68	-43	53	12
		8205	-15	72	+19	19	24
		8204	-11	76	-9	20	48
		8203	-9	78	-18	26	24
		8203	-2	85	-17	24	170
		8215	-1	86	+27	21	6
		8214	+1	88	+19	12	6
		8200	+14	101	+26	23	194
		8200	+18	105	+25	25	291
		8207	+26	113	+21	29	12
		8198	+35	122	+24	38	48
		8199	+37	124	+5	37	206

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR
SEPTEMBER 1946—Continued

Date	East- ern stand- ard time	Mount Wilson group No.	Heliographic	Area of spot or group	Spot count	Plate qual- ity	Observatory
			Dif- fer- ence in longi- tude	Lon- gi- tude	Lat- tude		
					Dis- tance from center of disk		
1946 Sept. 27	A M						
	10 20	8212	+52	139	-27	61	16
		8197	+52	139	+20	52	291
		8197	+59	146	+19	59	485
		8206	+72	159	-16	75	679
		8206	+77	164	-15	79	485
		(14)	(87)	(+7)			3,294
							152
28	15 13	8216	-70	1	-18	73	388
		(*)	-10	61	-21	30	16
		8213	-10	61	-43	51	24
		8213	-5	66	-43	50	24
		8205	-2	69	+21	14	12
		8205	+2	73	+19	12	24
		8204	+5	76	-10	18	36
		8204	+6	77	-19	27	12
		8203	+13	84	-18	29	170
		8217	+19	90	-9	25	12
		8200	+29	100	+26	34	218
		8200	+33	104	+25	37	436
		8198	+49	120	+24	50	24
		8199	+52	123	+5	52	206
		8197	+67	138	+20	67	242
		8197	+73	144	+19	73	412
		(11)	(71)	(+7)			2,256
							79
29	10 7	8216	-58	3	-18	63	388
		8219	-19	42	-27	38	16
		8213	+3	64	-42	50	24
		8218	+4	65	-21	28	73
		8213	+8	69	-42	50	36
		8205	+11	72	+19	16	48
		8204	+18	79	-8	24	48
		8203	+18	79	-19	32	24
		8203	+27	88	-17	37	109
		8200	+40	101	+27	43	24
		8200	+42	102	+25	44	436
		8198	+60	121	+25	61	12
		8199	+65	126	+5	65	194
		8197	+80	141	+22	80	194
		8197	+88	149	+21	88	388
		(11)	(61)	(+7)			2,014
							80
30	10 18	8216	-44	4	-17	50	364
		8218	+11	59	-22	31	6
		8213	+14	62	-42	50	12
		8218	+18	66	-22	34	12
		8205	+25	73	+17	27	24
		8204	+32	80	-11	36	12
		8203	+39	87	-18	46	121
		8200	+52	100	+24	53	218
		8200	+57	105	+23	58	359
		8198	+72	120	+24	72	12
		8199	+78	126	+5	78	194
		(9)	(48)	(+7)			1,314
							38

Mean daily area for 30 days = 1,764
Mean log+s for 30 days = 161.5

*Not numbered.
VG=very good; G=good; F=fair; P=poor.
g=number of groups; s=number of spots.

PROVISIONAL RELATIVE SUNSPOT NUMBERS FOR
SEPTEMBER 1946

[Based on observations at Zurich. Data furnished through the courtesy of Prof. W. Brunner, Swiss Federal Observatory, Zurich, Switzerland.]

September 1946	Relative numbers	September 1946	Relative numbers	September 1946	Relative numbers
1	115	11	49	21	88
2	128	12	68	22	101
3	127	13	92	23	133
4	97	14	89	24	109
5	63	15	100	25	139
6	49	16	95	26	132
7	49	17	90	27	152
8	49	18	99	28	129
9	40	19	100	29	105
10	50	20	90	30	93

Mean, 30 days = 93.7

Chart I. Departure ($^{\circ}\text{F.}$) of the Mean Temperature from the Normal, and Wind Roses for Selected Stations, September 1946

Chart I. Departure (°F.) of the Mean Temperature from the Normal, and Wind Roses for Selected Stations, September 1946

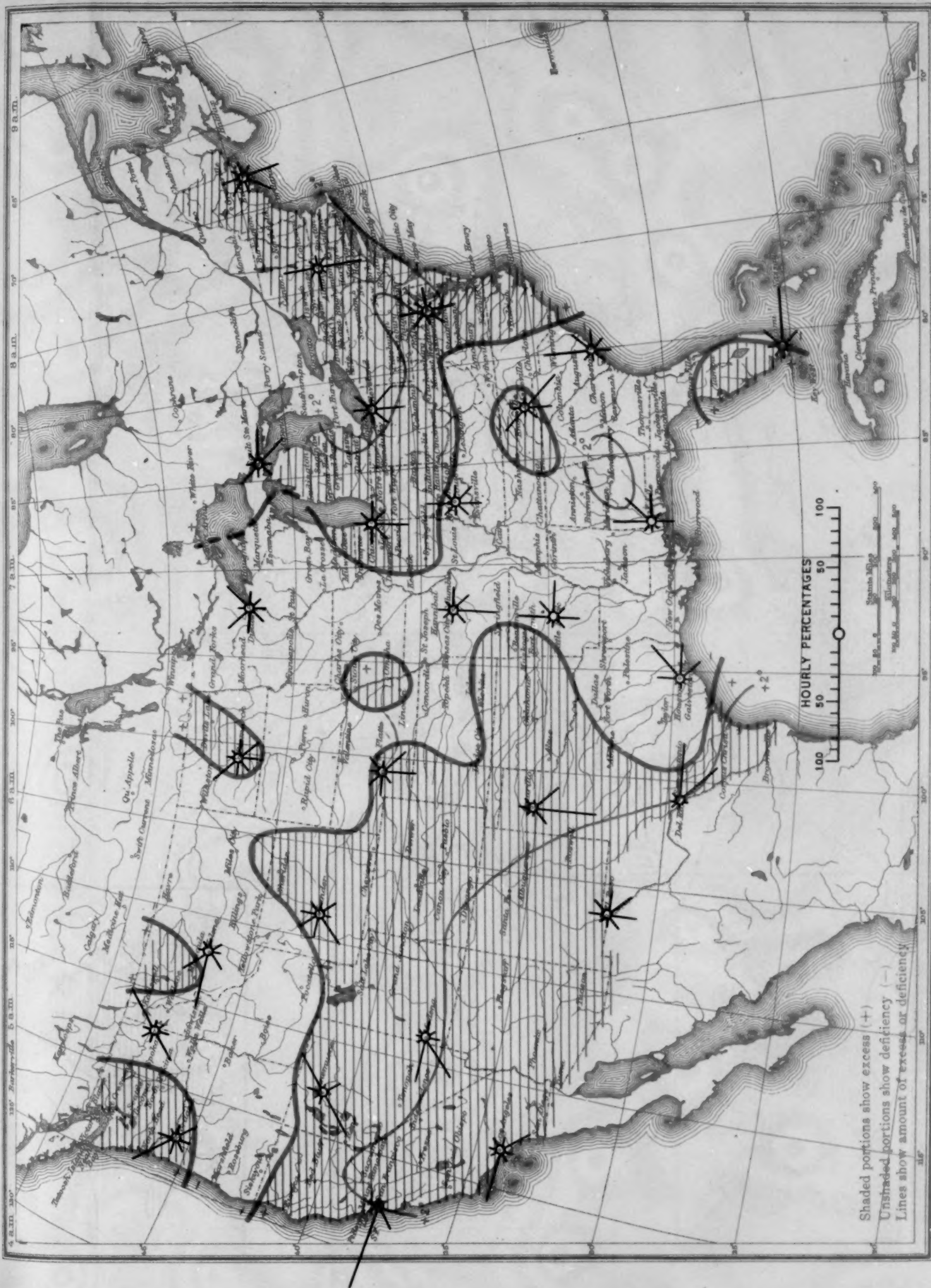
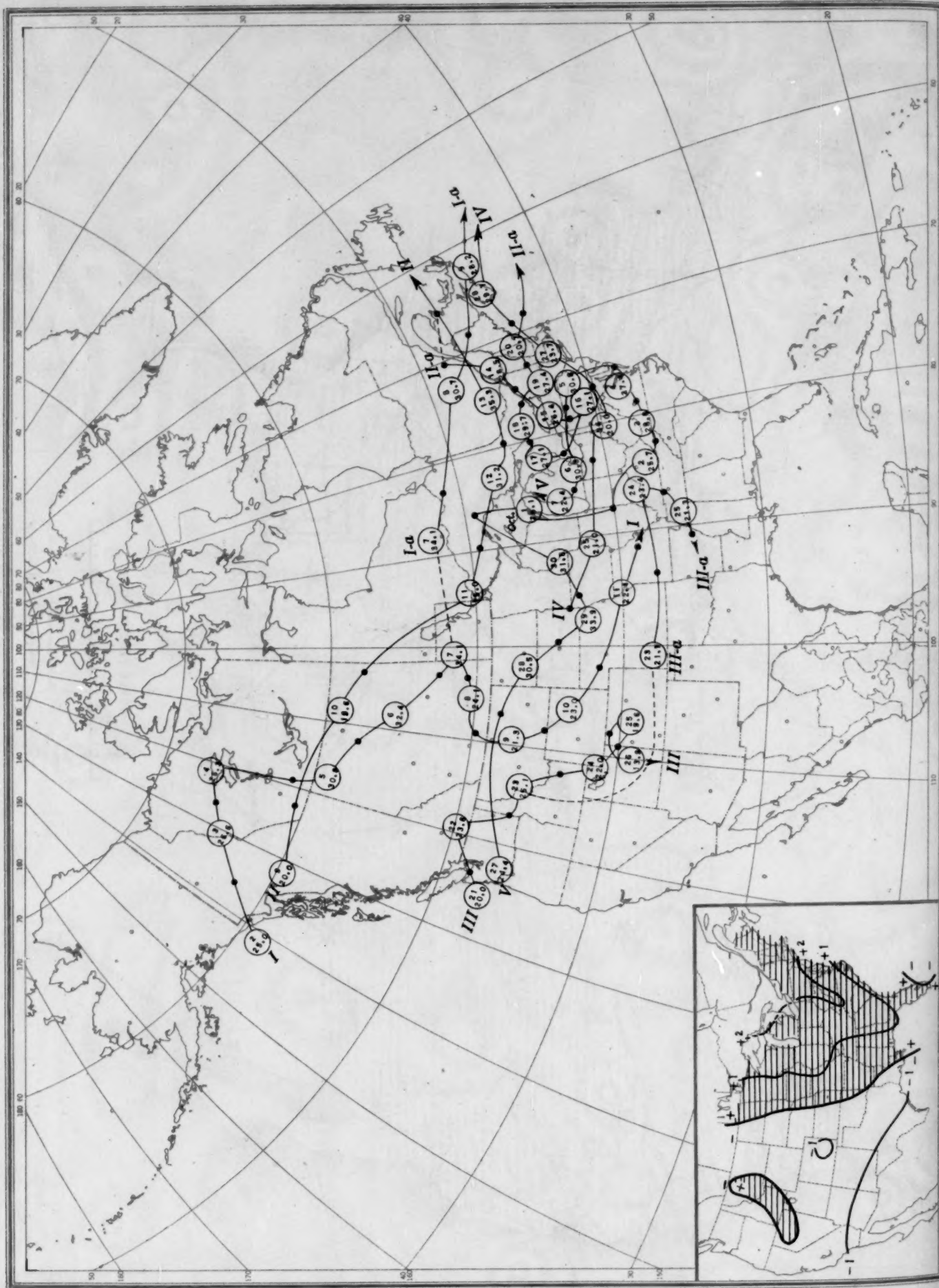


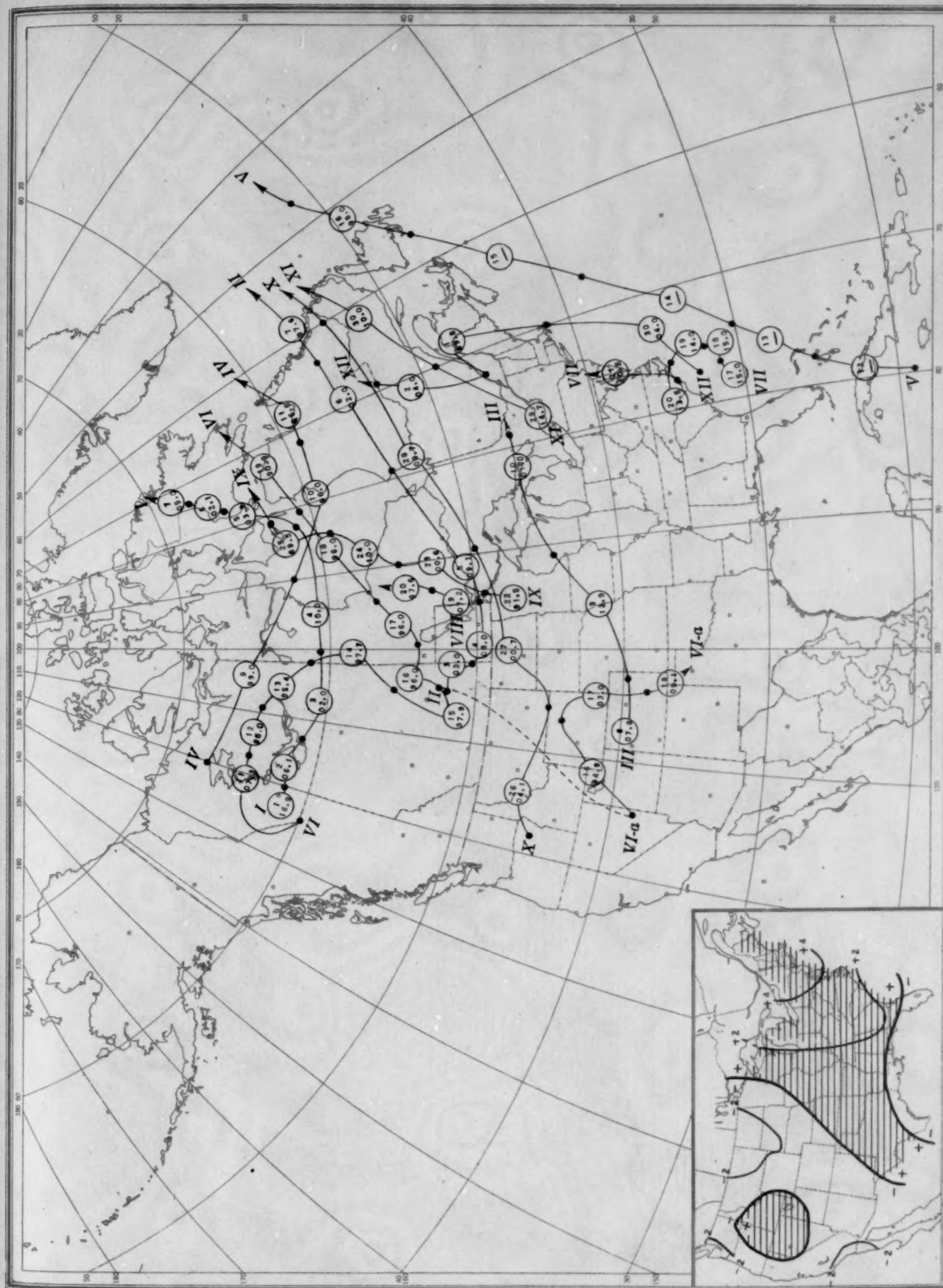
Chart II. Tracks of Centers of Anticyclones, September 1946. (Inset) Departure of Monthly Mean Pressure from Normal



Circle indicates position of anticyclone at 7:30 a. m. (76th meridian time), with barometric reading. Dot indicates position of anticyclone at 7:30 p. m. (76th meridian time)

Chart III. Tracks of Centers of Cyclones, September 1946. (Inset) Change in Mean Pressure from Preceding Month

Chart III. Tracks of Centers of Cyclones, September 1946. (Inset) Change in Mean Pressure from Preceding Month



Circle indicates position of cyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of cyclone at 7:30 p. m. (75th meridian time)

Chart IV. Percentage of Clear Sky Between Sunrise and Sunset, September 1946

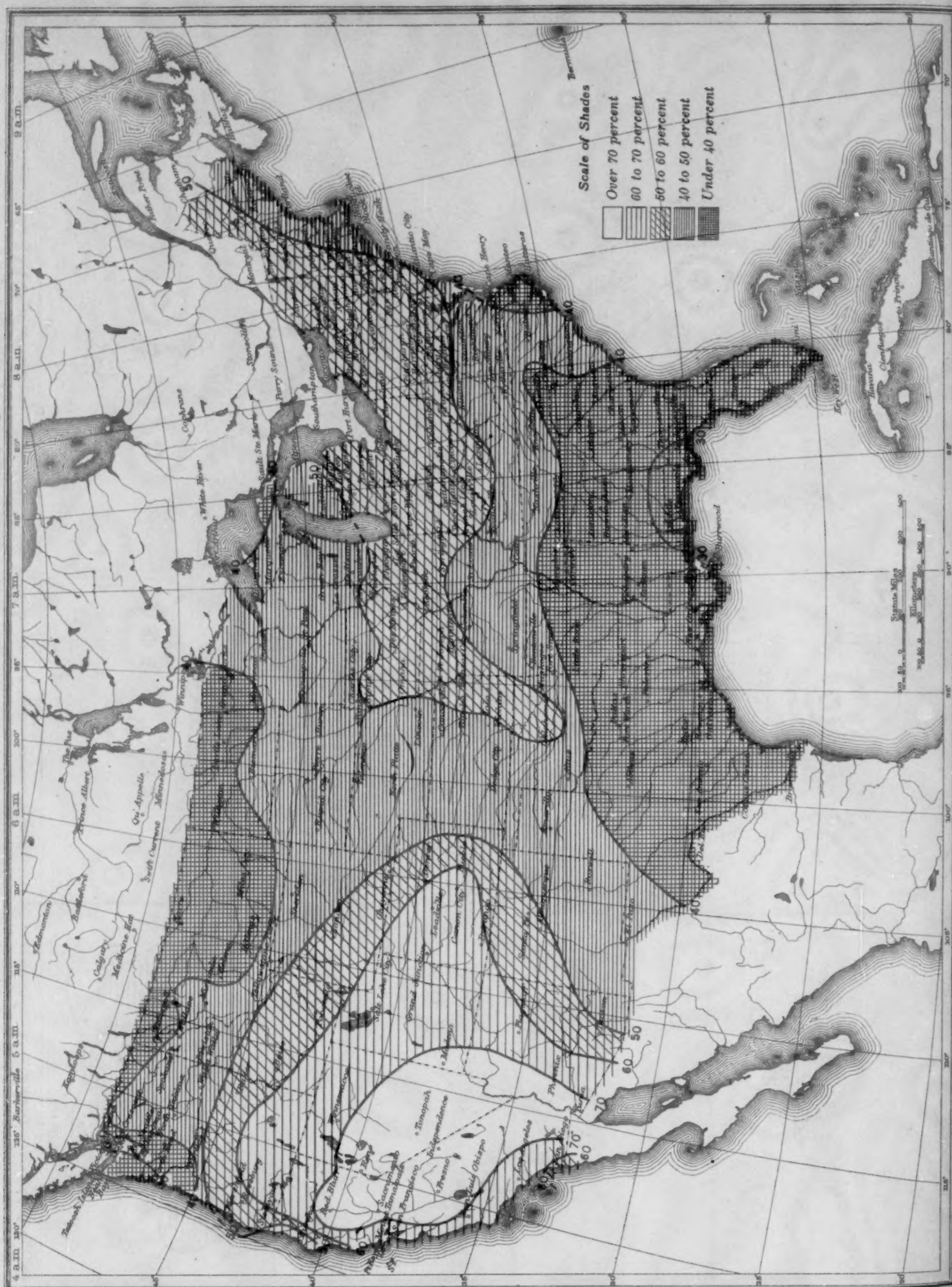


Chart V. Total Precipitation, Inches, September 1946. (Inset) Departure of Precipitation from Normal

Chart V. Total Precipitation, Inches, September 1946. (Inset) Departure of Precipitation from Normal

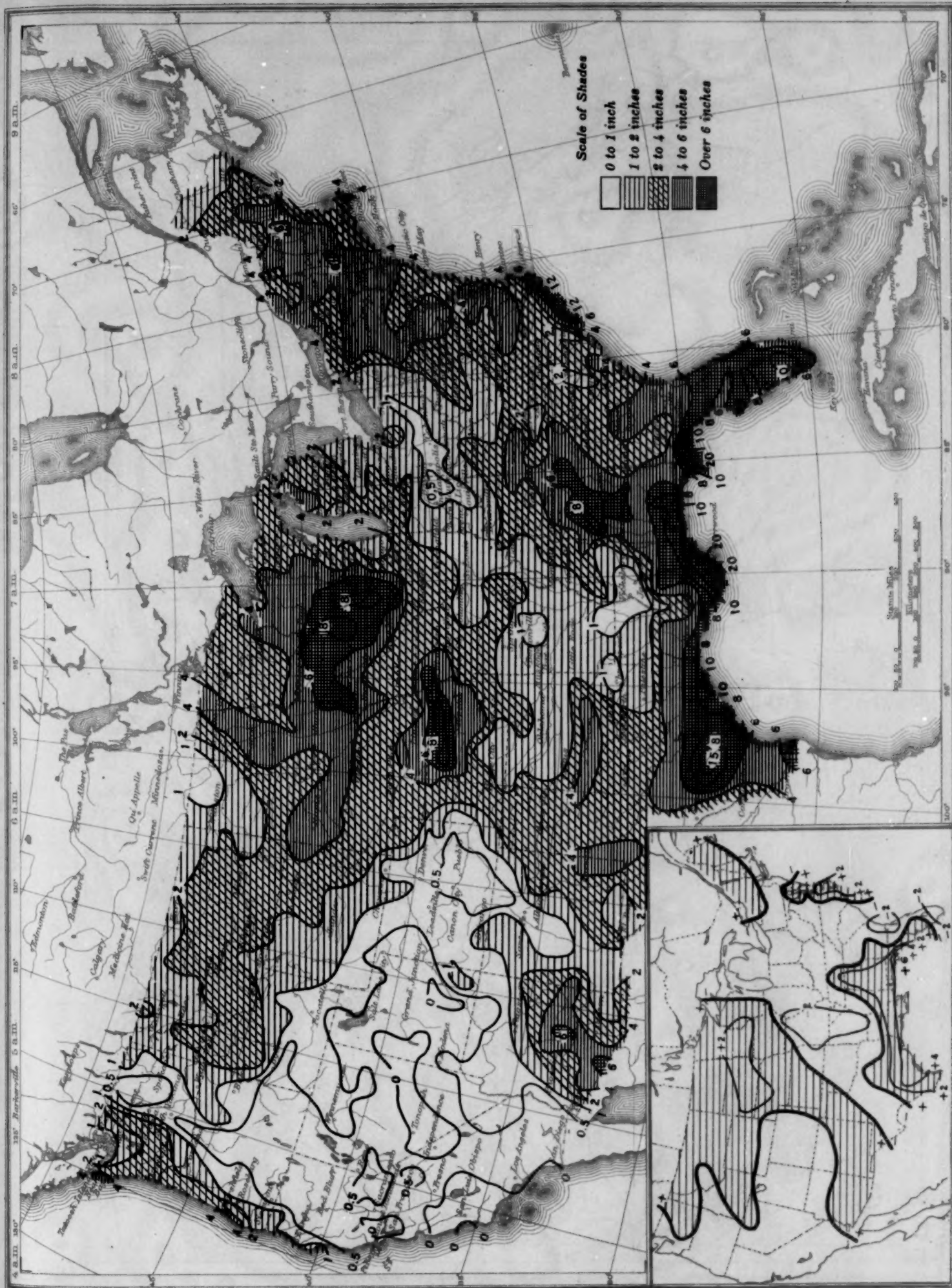
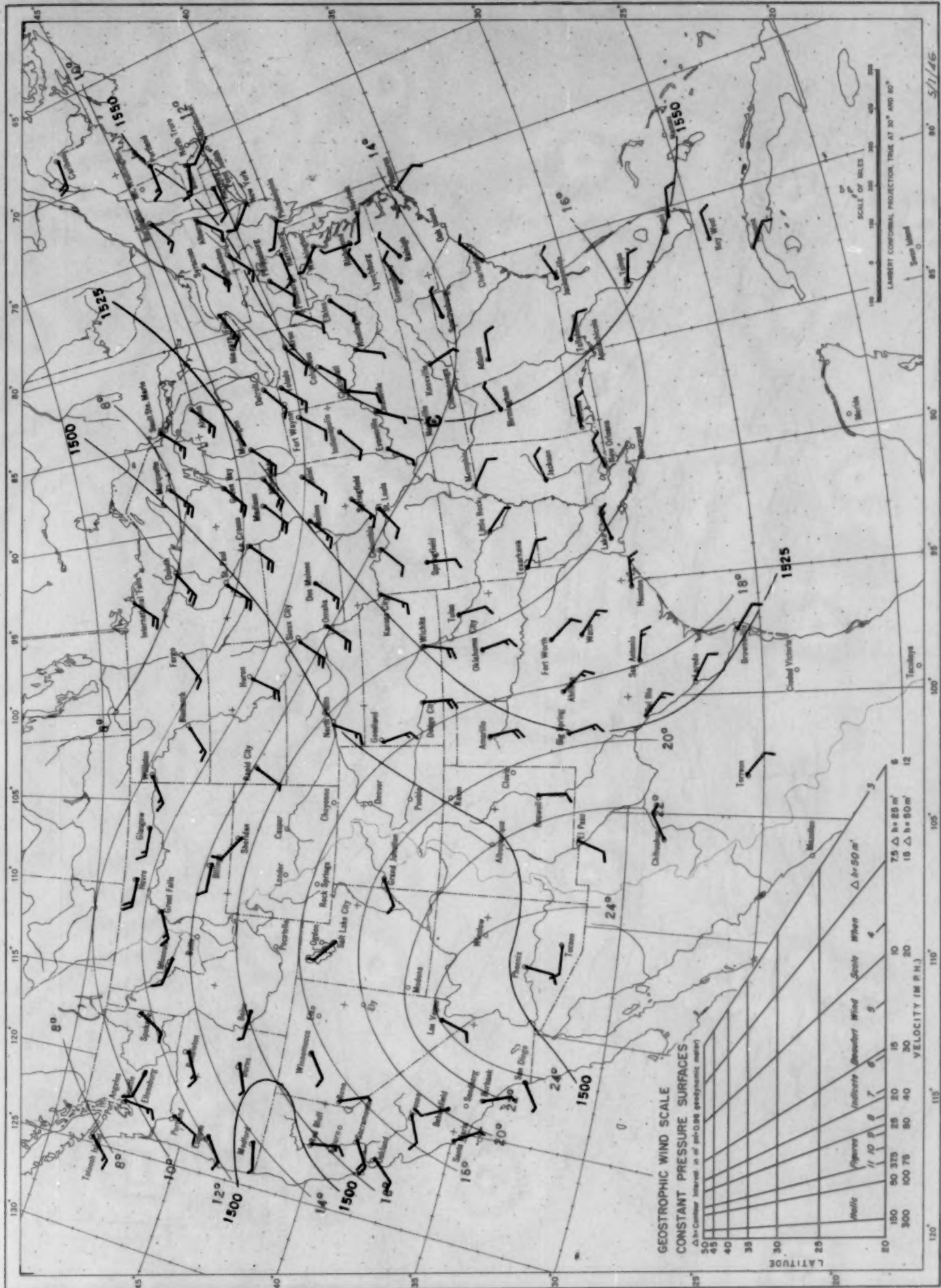


Chart VI. Isobars (mb.), at Sea Level and Isotherms ($^{\circ}$ F.) at Surface; Prevailing Winds, September 1946

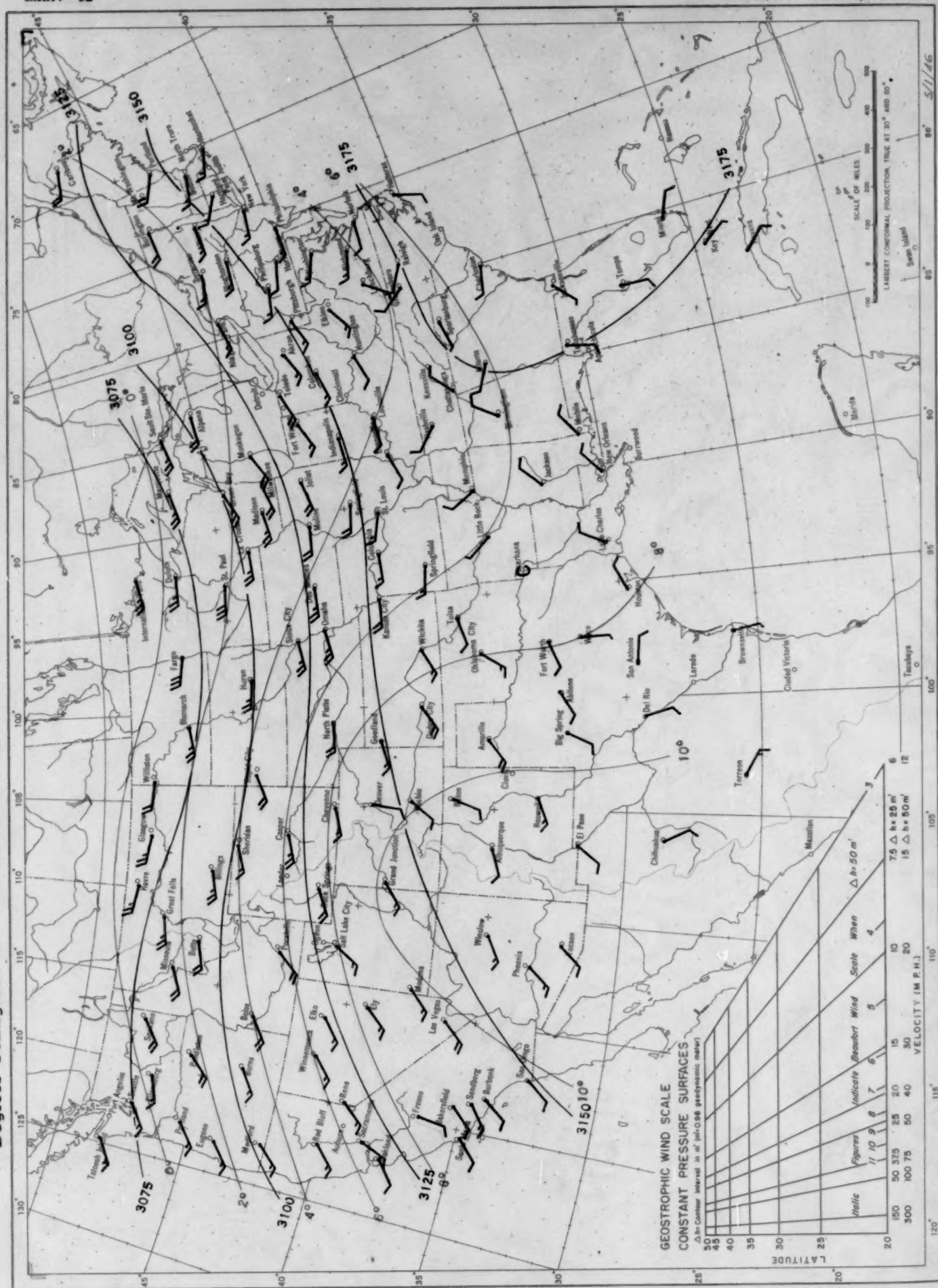
Chart VIII, September 1946. Contour Lines of Dynamic Height (Geopotential) in Units of 0.98 Dynamic Meter and Isotherms in Degrees Centigrade for the 850-millibar Pressure Surface and Resultant Winds at 1500 Meters

Chart VIII, September 1946. Contour Lines of Dynamic Height (Geopotential) in Units of 0.98 Dynamic Meter and Isotherms in Degrees Centigrade for the 850-millibar Pressure Surface, and Resultant Winds at 1,500 Meters (m.s.l.)



Contour lines and isotherms based on radiosonde observations at 0800 G.C.T., and winds based on pilot balloon observations at 2200 G.C.T.

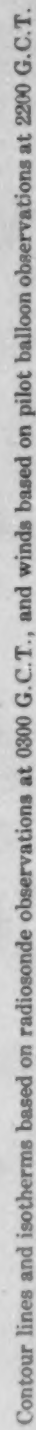
Chart IX, September 1946. Contour Lines of Dynamic Height (Geopotential) in Units of 0.98 Dynamic Meter and Isotherms in Degrees Centigrade for the 700-millibar Pressure Surface, and Resultant Winds at 3,000 Meters (m.s.l.)



Contour lines and isotherms based on radiosonde observations at 0300 G.C.T., and winds based on pilot balloon observations at 2200 G.C.T.

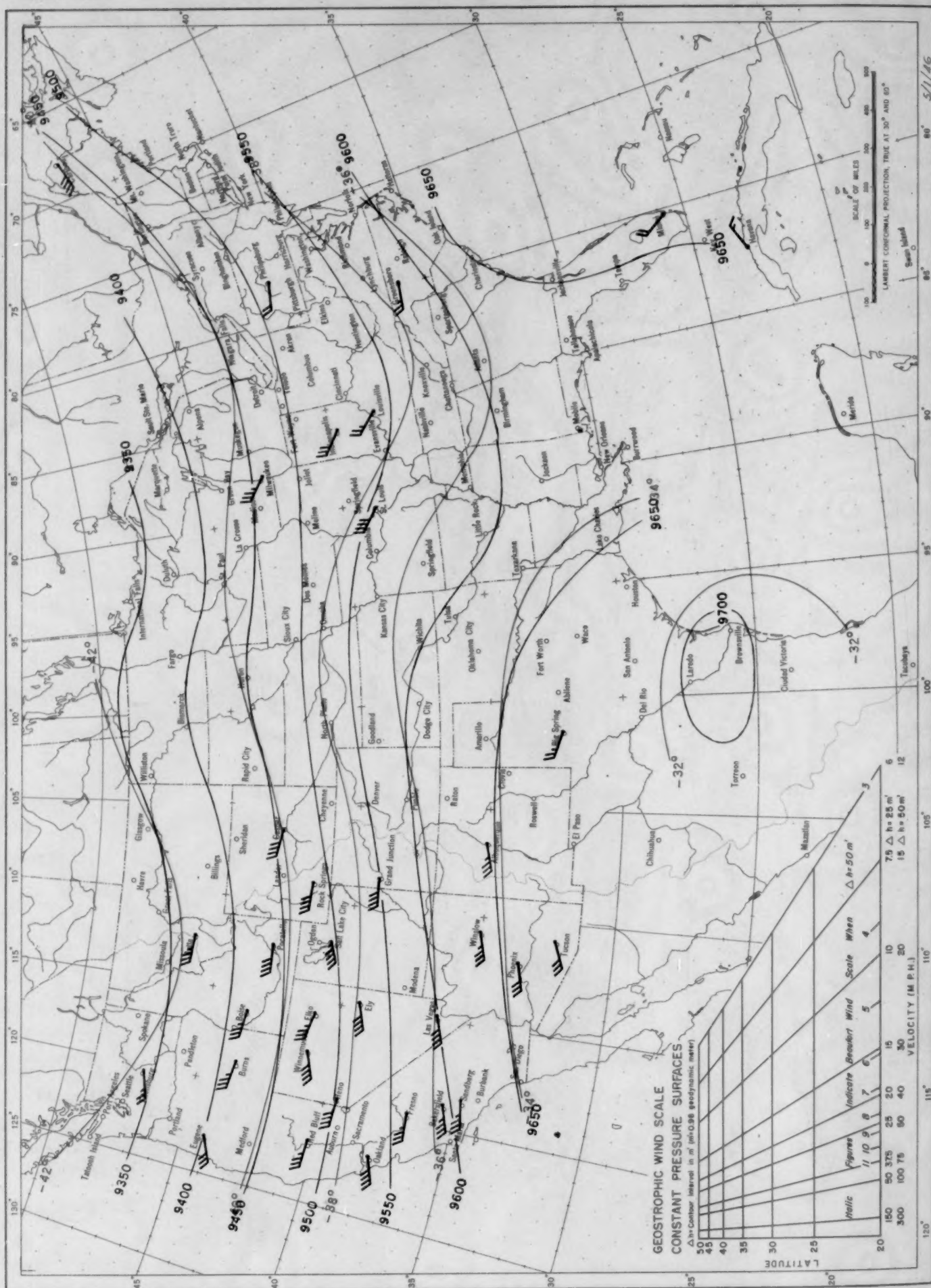
Chart X, September 1946. Contour Lines of Dynamic Height (Geopotential) in Units of 0.98 Dynamic Meter and Isotherms in Degrees Centigrade for the 500-millibar Pressure Surface and Resultant Wind at 5000 Meters.

Contour lines and isolines are used to represent the spatial distribution of a variable. Contour lines are lines of equal value, and isolines are lines of equal value. They are used to represent the spatial distribution of a variable.



Contour lines and isotherms based on radiosonde observations at 0300 G.C.T., and winds based on pilot balloon observations at 2200 G.C.T.

Chart XI, September 1946. Contour Lines of Dynamic Height (Geopotential) in Units of 0.98 Dynamic Meter and Isotherms in Degrees Centigrade for the 300-millibar Pressure Surface, and Resultant Winds at 10,000 Meters (m.s.l.)



Contour lines and isotherms based on radiosonde observations at 0300 G.C.T., and winds based on pilot balloon observations at 2200 G.C.T.